

# American Aviation



25c

*The News Magazine of Air Transportation*

SEPT. 1, 1948

## Pass the Pills, Pappy

**T**HESE ARE the days when over-night experts are prescribing all sorts of pills to doctor up the air transport industry and get it back into good health. As has happened before when the airlines have been in financial troubles, most of the clinical analysis and the pill prescribing is based on false premises and hastily-drawn conclusions.

*by*  
*W. W. P.*  
Not to be outdone, the Civil Aeronautics Board has just held its clinic, too. On August 19 with much advance fanfare the CAB held office hours for a single day to take the temperature and feel the pulse of industry. There had been some hopes that perhaps the CAB was ready to sit down and discuss and consider the really major problems of the air transport industry, but such hopes were dissipated in short order. A few pills were doled out and the CAB seemed very pleased to get the session over with and bask in the limelight of national publicity for having come to some conclusion about a 10% increase in fares.

Meantime the airlines are on the receiving end of virtual "commands" from numerous sources to eliminate free meals, to raise fares, to lower fares, to stop going to the public till for higher mail pay, to stop fighting the nonsked passenger carriers, to clean their houses, to fire more people, to stop being dependent on the government, to start to grow up, and so forth far into the night. The quack advice is drooling out all over the place.

It would be much simpler to look sensibly at the record and think in terms of fundamentals.

Before the war, mail pay was a large item of total airline revenue. For all of the trunklines, mail pay represented 25% of their total revenues in 1940, and 23% in 1941. It is doubtless true that the public considers the airlines to be heavily subsidized today. The railroads and the lack of good airline industry public relations have largely contributed to this false idea that the government's mail pay is needlessly high and that the airlines are getting more from the public trough than they should. Evidently this idea has even been absorbed by some of the aviation press, too.

If the airlines were getting a half, or a third, or a fourth of their revenues from mail pay, one might criticize with justice. But for the month of May,

(Turn to page 8)



## New President of C & S

Sidney A. Stewart, executive vice president of Chicago and Southern Air Lines for the past two years, became company president on Aug. 19, succeeding Carleton Putnam, who founded the airline in 1933. Putnam continues as chairman of the board and voting trustee of the company. (Story on page 16.)

## REFERENCE COPY

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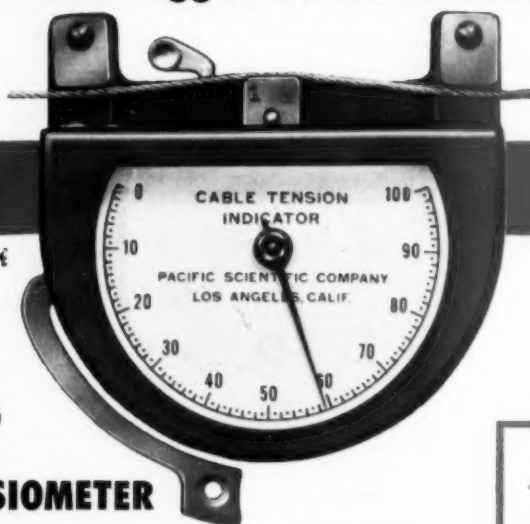
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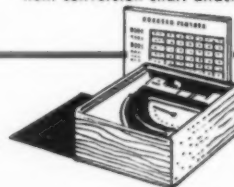
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## The Second Annual Goodyear Trophy Race

At the National Air Races in Cleveland September 4, 5 and 6, The Goodyear Tire & Rubber Company will sponsor the second annual Goodyear Trophy Race for light airplanes with \$25,000 in prizes. Goodyear sponsors this race

with the belief that competition will best serve to stimulate engineering progress, design research, and promote public interest in light aircraft. Goodyear, Aviation Products Division, Akron 16, Ohio or Los Angeles 54, California.



Plaque presented  
to each pilot competing in  
the Goodyear Trophy Race.



**MORE AIRCRAFT LAND ON GOODYEAR**

**TIRES THAN ON ANY OTHER KIND**

SEPTEMBER 1, 1948

## FORTNIGHTLY REVIEW

**Fare Confusion:** The domestic airline fare situation was confused last week following a conference of company executives with CAB. Most carriers, however, seemed on the way to a 10% fare increase. (Page 13)

**Airline Finances Studied:** The one government agency (RFC) which is empowered to make loans to air carriers has started work on a study of the financial condition of the air transport industry. Recommendations for helping industry over financial hurdles will go to President Truman. (Page 14)

**Salesmanship Needed:** The airlines are falling far short in developing the air cargo end of their business, according to A. M. Anzick, president of Airborne Perishables, Inc., and one of air cargo's biggest boosters. (Page 19)

**Improved Oxygen Equipment:** First official recognition of the inadequacy of the continuous flow, re-breather type of oxygen mask for crew members, now in use on most transports, has come from CAA. Airlines and CAA are seeking improved equipment. (Page 27)

### VA Promises 'Common Sense' in GI Program

Veterans Administration has decided against changing its current policy that has brought much confusion in dealing with eligibility of veterans for GI flight training, but has instructed field registrars to use "common sense" in administering the law. This was the gist of the information released by VA's public relations office after field registrars had completed a four-day conference in Washington last month dealing with administrative problems that have arisen since Congress amended the eligibility requirements for flight training courses.

In view of VA's decision to stand on the policy statement in Instruction Letter No. 1, field registrars are still faced with interpreting the requirements of the "complete justification" clause. A VA public relations official said that under the "complete justification" clause a veteran would be required to show how he can benefit his present or future earning capacity through GI flight training.

### Rentzel Studies CAA Policies

D. W. Rentzel, Administrator of Civil Aeronautics, last month made a thorough examination of CAA policies during a week-long meeting with CAA regional managers and deputy administrators. Basis for the conference was laid by Rentzel during an air tour of all the regional offices, including those in Hawaii and Alaska. "I am confident that a number of CAA policies will be more thoroughly defined as a result of this conference," the Administrator stated.

### Role of States in Safety Enforcement

Possible revision of CAA policy concerning role of states in enforcing air safety was subject of recent meeting of representatives of National Association of State Aviation Officials with Civil Aeronautics Administrator D. W. Rentzel. Policy agreed upon by CAA and NASAO in February, 1946, has worked out well in general, but Clarence F. Cornish, NASAO president, stated that experience acquired by the states indicates the need for some changes. Enforcement of both state and federal

(Turn to page 6)

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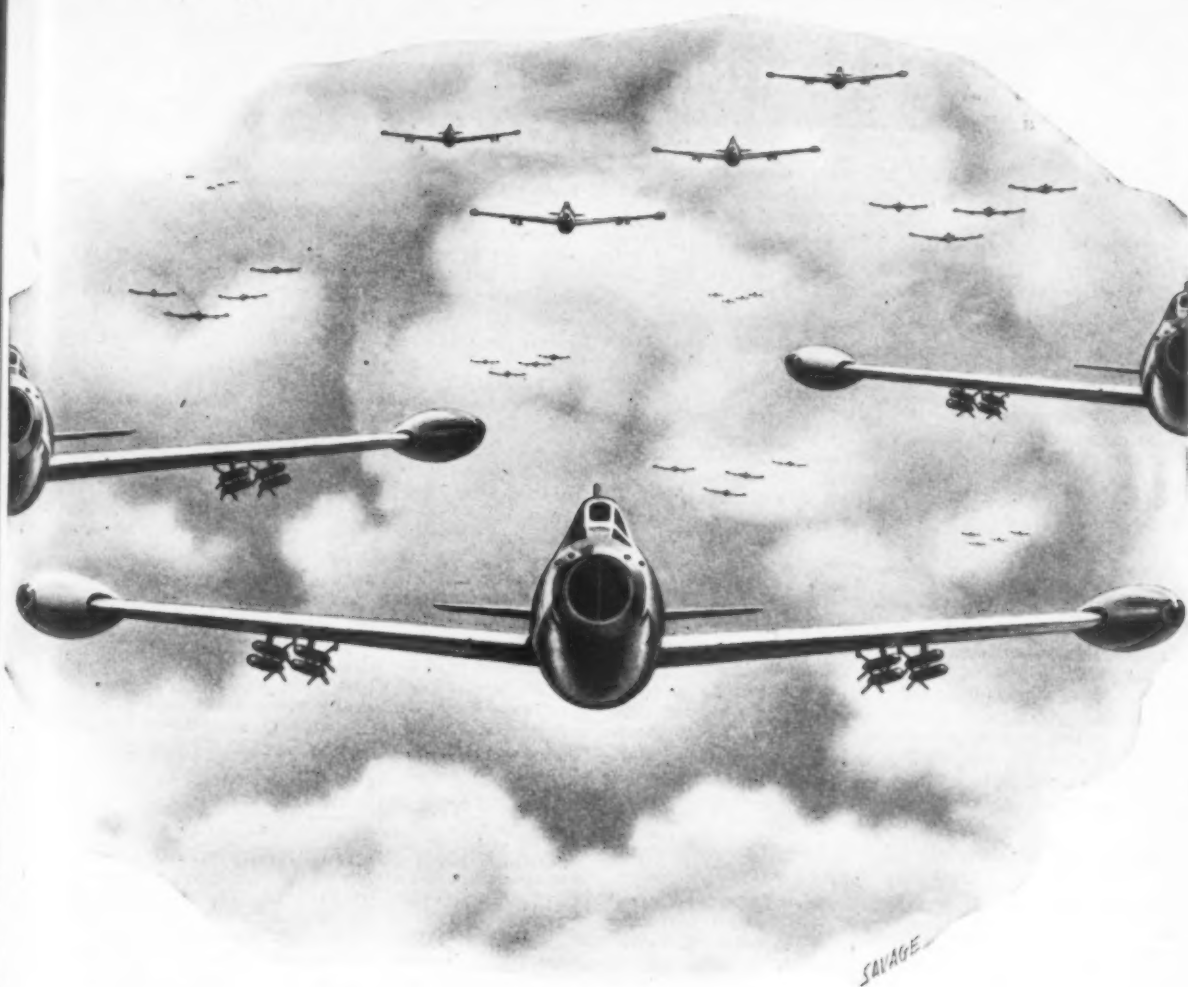
**Official Airline Guide** (formerly American Aviation Air Traffic Guide): Monthly publication of airline schedules, rates and regulations. Subscriptions: U. S. and Latin America \$7.50 one year; Canada \$8.00. All other countries \$9.00. Published from editorial offices at 139 North Clark St., Chicago 2, Ill. State 2154. H. D. Whitney, managing editor.

**Air Tariff Reports:** Issued three days a week from tariff and fare data filed by carriers with the Civil Aeronautics Board. Presented in condensed, coded form for quick-reference by air shippers and carriers. Separate reports on cargo and passenger filings. Subscription rates: \$75 yearly for both reports; \$50 yearly for either cargo or passenger reports.

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## PERFECTING ON SCIENCE...

When you see a jet propelled Air Force fighter or bomber plane speeding overhead . . . consider the time and effort taken to get it there. ¶ The REPUBLIC F-84 THUNDERJET first flew in February, 1946. Leading up to that important day, well over 500,000 engineering manhours were spent in putting together what was then known about the vexing problems of jet propulsion and high speed performance to create the first of these now-famous 600 mph jet fighters. ¶ Since then, several hundred Thunderjets have taken their place with various groups of the USAF . . . Another half-million engineering manhours have added greatly to the performance and utility of the F-84 . . .

To keep abreast of changing operational techniques, more than 400 major design improvements have been made between the first prototype and today's F-84C. ¶ And that's not all. New jet developments, along with new experiences in actual Air Force operations, are expected to require at least 300,000 engineering manhours per year, in order that the THUNDERJET will consistently satisfy ground crews, pilots and commanders . . . maintaining its leadership among the modern planes assigned to guard our peace and security.



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## FORTNIGHTLY REVIEW

(CONTINUED FROM PAGE 4)

safety regulations promises to place a heavy burden on the states and some state officials have indicated that they have neither the funds nor personnel to carry out the full program at this time.

### Thompson Jet Race Canceled

Because Air Force officials believe that a closed-course race with jet aircraft is too dangerous, the Thompson jet race planned to be held during the National Air Races in Cleveland, Sept. 4-6, has been canceled. However, nine AF Lockheed F-80's will participate in timed runs sponsored by the Allison Division of General Motors, which AF explained, is not actually a race. The F-80's will simulate a timed interception problem. The Navy will enter jets, with a number of North American FJ-1 Furies taking part in the Bendix cross-country jet race.

### Sept. 15 Deadline for Clinic Policy Bills

National Aeronautic Association has set Sept. 15 as deadline for submitting bills of policy for consideration at the Sixth National Aviation Clinic in Detroit, Oct. 18-21. The policy bills will be submitted to a rules committee which will decide whether they are of sufficient importance to be presented to the Clinic. Proposals should be sent to R. M. Phelps, executive v.p. of NAA and Clinic director, in care of Aero Club of Michigan, Book Bldg., Detroit.

### Names in the News:

**Donald Nyrop**, one-time assistant to a chairman of the Civil Aeronautics Board (L. Welch Pogue), has been named executive assistant to D. W. Rentzel, Administrator of Civil Aeronautics . . . **James M. Landis**, former chairman of CAB, and now associated with Joseph P. Kennedy in New York, has passed the District of Columbia bar examination, the first such examination he has taken. Landis, who is now a director of Colonial Airlines, said he planned to practice in Washington from time to time . . .

**Dr. George P. Baker**, former CAB vice-chairman and now professor at Harvard Business School, has been designated chairman of the Committee on Aeronautics of the Research and Development Board. The new committee was organized to handle those functions of the recently deactivated Aeronautical Board not already assumed by the Munitions Board . . . **Brig. Gen. Donald L. Putt**, deputy chief of engineering at Air Material Command headquarters, Wright-Patterson Air Force Base, Dayton, O., will replace **Maj. Gen. Laurence C. Craigie** as AF director of research and development. Craigie will be transferred to Wright-Patterson as commandant of AF Institute of Technology . . .

**Richard W. Millar** will retire as chairman of board of Northrop Aircraft, as soon as successor is elected, in order to devote greater portion of time to non-aviation activities. He will remain as a director member of executive committee and chairman of finance committee . . .

### Personal Plane News:

Shipment of 868 personal aircraft by 11 companies during July was reported by Personal Aircraft Council of Aircraft Industries Association. Included were 424 four-place planes and 444 two and three-place planes, with total value of \$3,234,000. Largest shipper in dollar value

was Cessna Aircraft Co. with 248 sales of five models totaling \$995,000; Beech Aircraft Corp. was second with 83 Bonanzas valued at \$663,000. The July shipments brought totals for first seven months of year to 4,725 commercial sales, valued at \$18,154,000.

**Atlas Aircraft Co.**, recently formed in Los Angeles, last month announced a price tag of \$2,995 FAF on a new all metal four-place plane. The low price gave rise to considerable skepticism in the industry, since it is generally regarded as a good rule-of-thumb to calculate personal plane costs at about \$7 per pound, and the new craft has empty weight of 2,082 pounds. Max B. Harlow, Atlas president and designer of the plane, brushed off doubts that the plane can be manufactured at the price quoted by explaining it was designed for price and that much of it can be "bench made" in sections. Significant in the Atlas announcement was statement that dealer franchises and maintenance operations would go forward ahead of production, suggesting that at least part of the financing is expected to come from dealers.

**Aerona Aircraft Corp.** has made price cuts ranging from \$170 to \$400 per plane, with new prices as follows (FAF Middletown, Ohio): Model 15AC Sedan, \$4,395, reduction of \$400; Model 11CC Super Chief, \$2,585, down \$190; Model 7DC Champion, \$2,495, down \$170.

**Texas Engineering and Manufacturing Co.** announced a \$500 increase in price of both models of the Swift 125. New prices are \$4,495 deluxe, \$3,995 standard.

### International

#### Nene-Viking Jet Flight Appraised

Caution should be used in appraising the recent 34-minute flight of the British Nene-Viking flight from London to Paris. Although hailed in some quarters as heralding a new era in jet transportation, those close to the operation received warning rather than hope from the results.

It has emphasized the need for designing airplanes to meet the jet engine demands. The low drag fuselage and wings which mark jet aircraft design are a necessary counterpart to jet performance. The modified Nene-Viking which made the "historic" flight had but a 270-mile range with under one hour endurance. Fuel consumption was so high that it caused many jet optimists to take another look at conventional reciprocating engines and compound diesel developments.

Most outstanding accomplishment of the flight will probably be to spur interest in the design of transport crafts which can utilize the potentials of jet power.

#### British Airlines Show Traffic Increase

The three British airlines—British Overseas Airways, British European Airways, and British South American Airways—showed increases in all classes of traffic in financial year April, 1947, to March, 1948, the Ministry of Civil Aviation reports. MCA listed following figures (1946-47 in parentheses): BOAC—passenger miles 296,054,000 (275,569,000); freight ton miles 7,201,000 (5,631,000); mail ton miles 7,215,000 (5,996,000).

BEA—passenger miles 122,475,000 (30,035,000); freight ton miles 1,559,000 (477,000); mail ton miles 573,000 (307,000).

BSAA—passenger miles 51,512,000 (31,496,000) freight ton miles 2,975,000 (1,115,000); mail ton miles 978,000 (783,000).

Too much weight should not be given to the comparison with the previous year, however, since the spheres of operations varied over the period.

# DOORWAY TO NEW-DAY MANAGEMENT



## Introducing AMERICAN AIRLINES AIRCONOMY PLAN

To impress upon business the full concept of air transportation, and to stimulate more comprehensive use of air transport, American Airlines has introduced and publicized its Airconomy Plan. The plan is based on the application of air transportation (air shipping, air travel and air mail), to the complete business operation.

We believe this plan will awaken management to its first real opportunity in decades to modern-

ize transportation and communications policy. And we believe that its introduction at this time is particularly important, because it opens a doorway to new profits in a time of high production costs and a "buyers' market."

New vitality and economy in distribution and merchandising can be the key to better business—and these can be attained by air transportation.

### The three aspects of the Airconomy Plan

#### SHIP BY AIR



Shipper and consignee profit by day-in, day-out use of Airfreight. Merchandise gets to market when it's wanted. Turnover is quickened, inventory losses averted.

#### TRAVEL BY AIR



The company and the individual benefit from air travel. Valuable man-hours are saved. Personal contacts are increased. More and better work is done.

#### MAIL BY AIR



Sending bills and all correspondence by air speeds paper work and increases rate of capital turnover. Order-to-delivery-to-payment period is shortened.

# AMERICAN AIRLINES

AMERICAN AIRLINES, INC. • AMERICAN OVERSEAS AIRLINES, INC.



## EDITORIAL

(CONTINUED FROM PAGE 1)

1948, after the Big Five domestic trunklines had received a higher mail rate, here are the percentages of total revenues which came from mail pay: American, 5.4%; Eastern, 2.8%; Northwest, 5.9%; TWA, 8.2%; and United, 6.2%. And the total mail percentage for all 18 domestic airlines, which includes some secondary lines with relatively high mail pay, was 6.9% for the month of May.

Where is this "subsidy" everyone's talking and writing about? Where is the "government till," whatever that may be? The airlines are carrying tremendous amounts of mail between hundreds of cities in the U. S., and take less than 7% of their revenues for this valuable service. Anyone who talks about "dependence" on the government is grossly uninformed. In a period of great national inflation, the airline mail pay has dropped from 25% in 1940 to under 7% in 1948. Here, at least, is a fundamental problem of airlines economics worth talking about.

**T**HEN THERE is another curious idea afoot. It is that the scheduled airlines are very, very naughty and out of order when they protest the continued existence of nonscheduled passenger carriers who are taking the easy road of hauling full plane loads of passengers across the country at low fares. There is an idea that this skimming the cream is jolly good fun and good old competition in the American way and that the CAB should certificate the nonskeds in order to bring scheduled airlines to their senses. Such tripe and nonsense actually appeared in an aviation magazine.

The nonscheduled air cargo field is something else again, but in the passenger field Congress has gone the full limit in laying out a program for the development of a strong national airline network. The scheduled carriers struggled for years before their existence was finally stabilized in 1938. They have struggled at great time and expense to extend their route structures. All of a sudden the existing system is faced with stiff competition by new and small operators who got into the field not through applications and hearings and oral arguments and all of the other legal proceedings, but through exemption orders and surplus airplanes.

One editor naively compares the air transport business to selling pickles and breakfast food when advocating the legalizing of the nonskeds, then asks, "Why is the scheduled air transport business any different?" Lord save us. Why is there an Interstate Commerce Commission, a Civil Aeronautics Board, a Maritime Commission and a Federal Communications Commission? Since when is a public utility on the same status as a gas station or a hot dog stand?

It is true that the scheduled carriers have shown a large degree of inaction and lack of initiative in exploring second-class air coach service, all probably due to the multitude of postwar economic and operating problems, but the solution to today's ills won't come from certificating cut-rate nonskeds which carry few or none of the responsibility of certificated point-to-point carriers. The volume of business being carried by the nonskeds at low fares is impressive enough, however, for the scheduled lines to explore ways and means of offering second-class service at lower than their now-prevailing fares.

**A**ND JUST recently there has arisen a hue and cry about complimentary meals served to airline passengers. In 1947 the 18 trunklines took in \$357,367,000 total revenues. They lost \$20,753,000. So somebody gets the idea of how the airlines are doing things wrong and looks up the cost of meals. The total happens to be just half of the industry loss. Quick arithmetic, and bingo! The day is saved. Eliminate all free meals pronto. It's just as neat and quick as that. So they say.

It's true enough that meals cost money. Quite a bit of money. But in 1947 the cost of meals was just 2½% of total airline expenses, so it might seem that the fuss over meal cost is a little out of proportion to the major problems such as sharply reduced mail pay, launching of new equipment, grounding of airplanes, sharply increased fuel costs, and much greater taxation and airport terminal costs. Also we think it quite fallacious to assume that the \$10,000,000 spent for free meals in 1947 could be erased automatically simply by charging for them. Meals still have to be ordered, cooked, processed, packed, loaded, and served.

Passengers have been led to assume that the cost of a meal is included in the price of the ticket, the ticket being in the first class bracket to start with. Meals are a part of passenger service. Start charging for meals and the customer is going to be choosy and demanding. Railroads and steamships have ample larder and storage space. Airlines don't have. Most passengers might as well settle for paying for meals if the fares are lowered. They won't relish being nicked for a higher fare and a meal charge on top of that. And charging for meals means a complicated set of orders, personnel, and the like, that will burn up part of the over-all passenger service cost. There is much that can be done on the meal situation, but it isn't a bingo game, and it isn't the cure-all by any means.

When the airline troubles boil down to fundamentals, the record of accomplishment is good. Management, by and large, has done a good job of lowering operating costs or keeping them far under the inflationary trend. Take Braniff Airways as one example. The operating cost per revenue passenger mile was 7.54c in 1941, but it is 6.57c today, a better record than any industry in America can produce. Braniff's cost per revenue ton mile dropped from 68.21c to 57.61c in 1947.

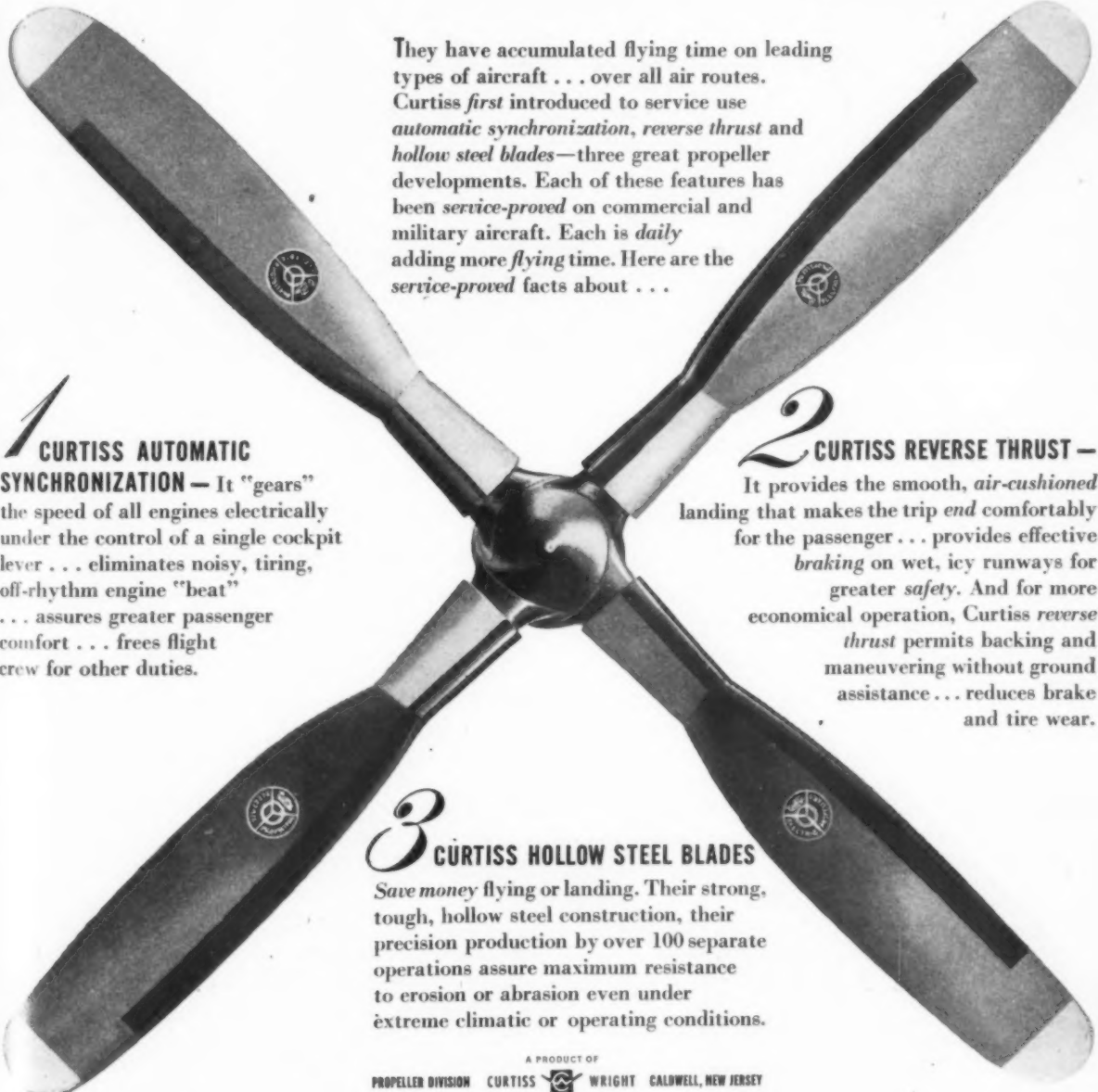
In 1941 Braniff needed a 50.23% passenger load factor to break even, including mail pay. For the first six months of 1948, it needed a 60.55% load factor to break even. Without mail pay and other incidental revenue, Braniff needed 77.56% load factor in 1941, needs only a 67.39% load factor today. These figures in themselves show a vast operating economy and improvement. Due to mechanization and streamlined procedures every Braniff employee in the first six months produced 10,012 revenue ton miles per month, but in 1941 this figure was only 6,808. In 1948 the revenue passenger miles per employee averaged 90,024, but only 61,648 in 1941.

The record of increased operating efficiency and economy is excellent despite sharply increased costs. There are troubles aplenty, but this is not the time for pills, it is time for rational and informed analysis.

WAYNE W. PARRISH



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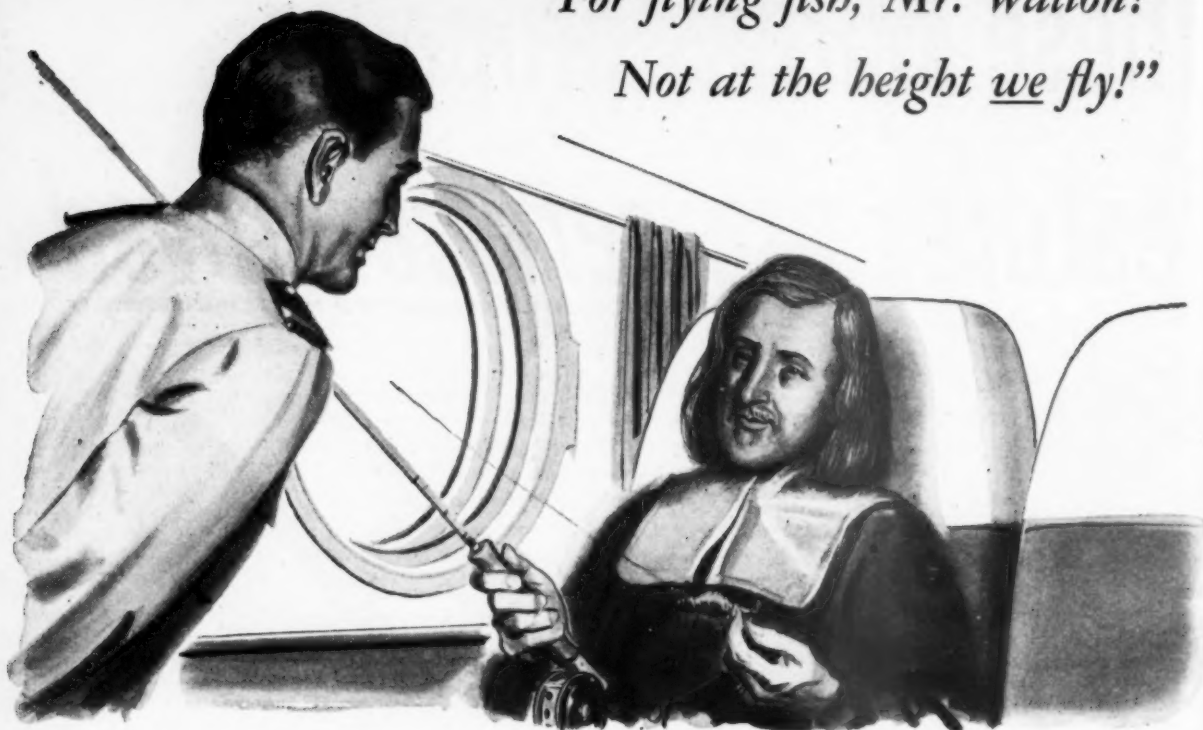
**3 CURTISS HOLLOW STEEL BLADES** Save money flying or landing. Their strong, tough, hollow steel construction, their precision production by over 100 separate operations assure maximum resistance to erosion or abrasion even under extreme climatic or operating conditions.

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## BACKGROUND & TRENDS

**Fare Publicity:** Airline sales efforts will not be aided by the CAB-industry session in Washington on Aug. 19. Previous announcements of fare increases received little press publicity, but the special CAB conference devoted primarily to discussion of fares and free meals got record amount of front-page attention. Despite CAB effort to solve complex problems in single day, the fare situation is chaotic (see page 13) and some airlines will stand by and let competitors act first.

**Disappointing Traffic:** Compared with previous years, summer business has been generally disappointing for a number of the domestic airlines. Indicative of traffic drop is United Air Lines' report that revenue passenger miles in July were down about 10% from June and more than two million below July, 1947.

**Legal Test:** CAB's legal powers may be in for important test in the Standard Air Lines appeal to the U. S. Court of Appeals for the District of Columbia. Letters of registration issued to irregular carriers always include a warning that CAB may suspend the letter at any time. CAB feels it has full authority to do this, but the power has never been tested in a court prior to the current Standard case.

**Bad Inheritance:** Present CAB members are inheritors of difficult economic situation resulting from way their predecessors allowed non-certificated carriers to do extensive cut-rate business under Economic Regulation 292.1. Observers point out that entire problem could have been prevented if CAB had not been so generous with its exemption authority.

**Military Transports:** The Berlin crisis has driven home to some U. S. military leaders this country's serious lack of an adequate military air transport fleet to meet international emergencies. Indications are that when Defense Secretary Forrestal reviews procurement plans this month he will restore the \$197,000,000 for Air Force plane procurement which he cut back in May, and at least a portion of Naval aviation's \$100,000,000 cutback. AF is looking hard for transport plane funds, may be expected to allocate a sizeable slice of any restored funds for transports, both two and four engined types.

**Parcel Post Timetable:** While inauguration of domestic air parcel post service on Sept. 1 commands major attention at present, Post Office Dept. is moving ahead in extension of international air parcel post throughout world. Probable timetable for new international service includes Sept. 4 to South America, Sept. 11 to Orient. Special rates on printed matter to Europe may start about Sept. 18.

**Constellations Favored:** Elimination of the need for new training program, new maintenance and overhaul set-up, and spare parts inventory were important factors involved in Eastern Air Lines' decision to buy more Constellations instead of new twin-engined aircraft (see page 16). Eddie Rickenbacker believes Constellations fit EAL service pattern better than twin-engined planes available, also feels that DC-3's are good for at least five more years.

**Consolidated Maintenance:** Success of Colonial and Capital Airlines arrangement for one line doing station maintenance of both is likely to influence other carriers into trying similar plan. TWA and American Airlines make a likely combination for this purpose at Washington.

**Fewer Mechanics Needed:** American Airlines' lay-off of maintenance personnel in New York is not the sole result of low passenger traffic but rather reflects maintenance savings brought about by faster airplanes which complete close to two schedules per unit of time compared with the DC-3. This sharply reduces maintenance requirements.

**Improved Safety:** Passenger fatality rate of the U. S. carriers, domestic and international, for the first quarter of 1948 was 0.7 per 100 million passenger miles as compared to 0.9 for the same period during 1947.

**Challenge Withdrawn:** Continental Air Lines has withdrawn its challenge to other carriers to participate in an On-Time operations contest on an industry-wide basis because of an insufficient number of entrants to make the contest worthwhile. Airlines declining to enter gave a variety of reasons for so doing. Continental will continue with its own system-wide On-Time contest.

**In Reverse:** It is unlikely that the CAA and ATA will arrive at common agreement on the formula which should be used for computing landing distances on airplanes equipped with reversible pitch propellers at this time. Rich fuel mixtures accompanying propeller reversing at altitudes above 3,000 feet which cause the engine to stall represent the most serious obstacle to general acceptance. When this problem is solved likelihood is that individual airplanes will be subjected to tests for final credit determination with no fixed formula resulting.

**Central Reservations:** Look for developments in establishment of central reservations system for all the scheduled airlines. Actual use may be several years off but important basic policies are now under discussion.

**Hollywood Headache:** Universal Pictures, with minimum of imagination, is planning production of "Air Crash", which is supposed to show how CAB investigators uncover causes of accidents. Judging from the title and past products, the Hollywood touch should provide a major headache for the airlines.

**Prefers His Own:** British passenger service is far superior to that in U. S., Sir Miles Thomas, deputy chairman of BOAC, recently said in an interview with Flight, British publication. Sir Miles, who had just returned to England from a U. S. trip, reportedly declared that stewardesses in U. S. were not so well trained or as courteous as BOAC's, also that pilots were more "ham" in handling their aircraft.

**Honolulu First:** Pan American Airways, which expects to have four Boeing 377 Stratocruisers in operation this winter, has decided to put them into service on its Honolulu run first—San Francisco to Honolulu to Los Angeles to Honolulu to San Francisco.

**Case Histories:** Beech Aircraft Corp. is emphasizing "case histories" in its Bonanza sales campaign. Since January, 1947, a total of 364 stories about how Bonanza owners use their planes have been run in the newsy house organ, The Log, which Beech distributes around the world. This type of sales promotion has been effective.

**Changing Name:** All American Aviation, Inc., is expected to change its name to All American Airways, Inc., at this month's stockholders meeting.



**"Does Bonanza travel pay?"**

*It triples my business!"*  
 ... reports Robert Yarnall Richie, industrial photographer



"In my 4-place Bonanza the other day, my assistants and I flew the 250 miles from Tulsa to Madill in 1½ hours. Between 2 p.m. and sunset I completed a big oil refinery photographing job. Next morning we loaded my 500 pounds of equipment and hopped to Longview, 225 miles away, for an equally big job there.

"The net result was completion of two jobs in two days, plus several contacts for future business. Gas and oil cost \$12.85. Two comfortable, restful hour-and-a-half flights instead of two days of hard driving on the road. Many of my clients are off regularly scheduled routes, and public transportation would not serve us.

"I know of a manufacturer in Los Angeles, a doctor in New York, and an engineer in Texas who, with their Bonanzas, have tripled the area they can see to personally—and at great personal profit. The Bonanza certainly is a revolutionary new kind of business machine."

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AMERICAN AVIATION



## Airline Fare Situation Chaotic After CAB-Industry Session

By DANIEL S. WENTZ II

The domestic airline fare situation was chaotic last week, and no one could predict just where the fares would settle.

Presidents of most of the nation's 16 major trunk airlines gathered in closed meeting with the five members of the Civil Aeronautics Board on Aug. 19 to talk over the industry's economic plight. At the close of the meeting they heard CAB announce its position: the situation today "justifies, in fact requires, a 10% increase in passenger fares."

The Board hoped the "Big Five" would raise their fares and that companies competing with their systems would match the increases. However, the fare problem was not nearly as simple as CAB had apparently hoped.

The industry was not at all in agreement that higher fares would improve business.

After the meeting, CAB Chairman Joseph J. O'Connell, Jr., told the press what the Board had recommended to the airline heads, adding that he had "every reason to believe" they would go along with CAB's wishes. He explained that CAB wanted to suggest a course of conduct to the industry.

**Industry Divided.** It turned out that Eastern, Northwest, TWA and United wanted 10% higher fares; American Airlines did not. C. R. Smith, AA's Board chairman, said his company had no intention of seeking any rate higher than 6c per mile.

Some of the smaller airlines felt higher fares would do more harm than good. Others said they were willing to try the experiment.

One company hinted that it would probably try a day-coach type service at a substantially reduced fare. Some would probably wait to file their new tariffs until the course of events became a great deal more certain.

CAB's conference with the carriers began hopefully with a five-point agenda covering (1) passenger fare increases; (2) free meals aloft; (3) schedule and load factor control; (4) joint use of facilities and personnel; and (5) industry cooperation aimed at increasing traffic. At day's end, the meeting had spent 98% of its time on the first two items, covered the remainder only in passing. CAB asked the carriers to think about subjects not covered and send in their comments. A further meeting might

### Fares at a Glance

As of noon, Aug. 25 the domestic airline fare situation was as follows, as shown in tariffs on file with CAB:

**American Airlines**, effective Sept. 1, would equalize all fares at about 6c per mile and eliminate DC-6 differentials. American's Monday-Tuesday-Wednesday promotional fare was filed in separate tariff.

**Northwest**, effective Sept. 12, would provide an increase which, with a recent upward adjustment, would raise basic fares to the levels proposed by United and TWA, the two adjustments taken together amounting to an increase of about 10%. All round-trip discounts and 5% penalty refunds when flights are more than 30 minutes late would be cancelled.

**TWA** would increase all basic fares 10% on Sept. 1, retaining the fare differential for Constellation service. TWA had indicated it was preparing a 5% round-trip discount, but this had not yet been filed with CAB.

**United Air Lines** would increase all basic fares 10% on Sept. 1, retaining fare differential for DC-6 service. United announced a 5% round-trip discount plan, but this had not been filed with CAB.

be held to take up the undiscussed points.

O'Connell said CAB would approve 10% increase tariffs already filed by TWA and United. He explained that the general industry action called for by CAB would not result in an "across the board" increase because some non-competitive routes whose fares are now above the general industry level of 5.6c per mile would not be touched.

He declined to comment on American's plan to raise all fares to the present 6c level of its DC-6 fares, coupled with a promotion tariff providing special rates on Monday, Tuesday and Wednesday of each week. O'Connell stated flatly that CAB felt the price differential on DC-6 trips should be retained for the time being.

**Smith Replies.** This produced a quick reply from American Airlines' C. R. Smith, who stated that press reports to

the contrary, there had been no general agreement between Board and airlines at the meeting. He added that American had not "entered into any such agreement or that it has any intention of doing so."

AA's present fares are 6c per mile for DC-6 and 5.5c per mile for other flights. Smith said AA would agree to equalizing all fares at 6c per mile. But this could not be done if CAB wanted to keep the differential for DC-6 and Constellation trips.

"It is our firm belief," Smith said, "that any general fare increase beyond the level of 6c per mile will place our fare structure in the area of diminishing returns. In addition to resisting any fare increase beyond a 6c level, American Airlines is seeking permission of the Board to institute a 'family package,' the effect of which is to make substantial reductions in the cost of air transportation on Monday, Tuesday and Wednesday, days of the week when the load factor is lower than on other days.

"This plan in the opinion of the company will produce additional income and at the same time bring air transportation within the cost reach of a greater number of people."

Commenting on an industry-wide hike in fares, Smith added, "American recognized the need of the air carriers for additional revenue but in our opinion we would not secure additional revenue by encouraging passenger price resistance and pricing ourselves out of the market. We told the Civil Aeronautics Board yesterday that we would take in less money at 6½c than at 6c and therefore we opposed raising air fares above 6c per mile."

There were indications last week that CAB Chairman O'Connell would call a follow-up session of the "Big Five" airlines for further discussion.

**Free Meal Issue.** The touchy question of free meals was also discussed at the meeting. O'Connell told the press that if CAB had to make a decision today, "we would have voted—at least a majority of the Board—to end free meals."

A Board exhibit purported to show that the \$20,900,000 loss for 1947 might have been cut to \$9,900,000 without free meals. The airlines were not all convinced that free meals should or even, perhaps, could be cut out. CAB will think over the problem further and will then "let the carriers know" what it comes up with. Airlines will send CAB their comments on agenda items not discussed at the meeting.

W. A. Patterson, president of United Air Lines, was quick to react to the meal issue. Regardless of what other airlines may do, United does not intend

to make a separate charge for meals on its planes, he said.

"I can't understand how anybody could be so naive as to believe meals are not included in the price of the passenger's ticket," he explained. "Meals have always been included in the price of our tickets and we intend to continue serving them without a separate charge. They have become part and parcel of our standard of service and have proved immensely popular with passengers."

"Furthermore, they cost us only two-tenths of a cent per passenger mile, which is negligible as compared with other costs also included in the ticket."

American and TWA later joined United in opposing the idea of charging for meals aloft.

O'Connell would not make any guesses on the probable economic effects of the fare increase, but the inference was strong that it would not wipe out 1948 losses. He thought the conference was desirable and helpful and said he "would like to believe the general effect was good." Referring to the airlines, he said: "The next move is up to them."

**Mixed Reaction.** Industry reaction was that the meeting did some good even though results were not quite as positive as O'Connell indicated to the press. Many airline men were surprised that the chairman spoke as though the fare increase would actually come about, since CAB had not asked the airlines for opinions on what they are going to do and would have considerable difficulty in making any increase mandatory. He told the closed meeting that all CAB could do would be to suggest, but he spoke to the press in more positive terms.

Actually more airlines opposed an increase than favored it. At least nine companies at the meeting favored no increase, although some said they would go along if necessary. Six companies were definitely in favor of an increase. Five companies opposed charging for meals; ten favored the proposition. Of the latter, some wondered how a workable charge system could be set up.

It seemed generally agreed that CAB got some idea of how the industry has kept seat-mile and ton-mile costs down despite generally rising prices, and how mail pay plays a relatively small role in total revenues.

## RFC Studies Air Finances

The Reconstruction Finance Corp.—the one government agency which is empowered to make loans to air carriers—started work last week on a study of the financial condition of the air transport industry with a view of recommending to President Truman ways and means of helping the industry over its present financial hurdles.

Great significance was attached to the fact that the President had ordered the study. It came closely on the heels of the decision of the Civil Aeronautics Board to call a conference of airline

heads on the question of passenger fares and costs.

Assigned to do the task for RFC, Morris Levinson, chief of the transportation branch, said a working arrangement would be effected whereby CAB would furnish RFC with considerable data concerning airline operations.

Heads of RFC, CAB, and Budget Bureau had been called to the White House Aug. 12 after which the White House issued a statement which said: "The President indicated that he was extremely interested in finding means by which this industry could obtain the types of financing best suited not only to its immediate requirements but also to its long term development. In view of the experience of the RFC in the financial field together with its close working relationship with private financial institutions he requested the corporation to study this matter for the purpose of placing before him at an early date an appraisal of the situation

together with its recommendation. The President also requested the CAB and the Director of the Budget to assist the RFC in this study."

One main motivating factor common to both the CAB-airline conference and the White House meeting was the fact that the country's airlines lost \$20,900,000 in 1947. Figures for 1948 were no better, indeed probably worse, with a \$14,000,000 operating loss through May. Some sources said several larger airlines actually lost money even during July, an unheard-of thing in an industry whose summer months usually underwrite wintertime losses.

**Action Welcomed.** The President's action won immediate acclaim from airline leaders. W. A. Patterson, president of United, said: "We welcome a study by such a capable agency as the RFC. Time is of the essence and if promptly undertaken, such a study cannot help but produce constructive results."

## Air Mail Subsidy a Myth, Study Shows

Air mail payments to the domestic scheduled airlines are not only far from being in the subsidy class but comprise a very minor share of operating revenues, an AMERICAN AVIATION survey for the first five months of 1948 reveals.

Mail pay represented less than 10% of total revenues for the entire industry which includes a number of secondary airlines receiving relatively high mail pay, and includes mail pay increases for the "Big Five."

Mail pay for the five major companies was as low as 2.5% of total revenue for Eastern in February to a high of 8% for TWA in May, except for the month of March when retroactive payments were made to TWA, Northwest and United which

boosted mail revenue abnormally for that month.

Impression has been gaining ground that mail pay represents as much as a third of airline revenues, whereas the actual figure is less than one-tenth. But in 1940 the airlines as a whole received 25% of their revenues in mail pay, and in 1941 the percentage was 23%. Since then the percentage has declined sharply.

The following tabulation reflects higher mail pay under the new rate for American and Eastern beginning in April, and for TWA, Northwest and United beginning with March, with the March mail pay figure including retroactive pay for January and February.

	1948 (Domestic operations)				
	Jan.	Feb.	March	April	May
<b>American Airlines</b>					
Total Operating Rev. ..	\$4,531,565	\$4,177,168	\$5,285,906	\$6,342,308	\$7,939,060
Mail Revenue .....	204,795	201,943	224,620	312,836	424,944
% Mail of total .....	4.5%	4.8%	4.2%	4.9%	5.4%
<b>Eastern</b>					
Total Operating Rev. ..	\$5,365,889	\$5,564,891	\$6,807,096	\$6,042,892	\$5,390,478
Mail Revenue .....	138,683	141,164	182,204	156,637	152,468
% Mail of total .....	2.6%	2.5%	2.7%	2.6%	2.8%
<b>Northwest</b>					
Total Operating Rev. ..	\$1,212,733	\$1,070,287	\$1,427,858	\$1,701,653	\$2,001,877
Mail Revenue .....	103,445	97,523	175,564	125,381	119,335
% Mail of total .....	8.6%	9.1%	12.3%	7.4%	5.9%
<b>TWA</b>					
Total Operating Rev. ..	\$4,406,045	\$3,813,488	\$4,854,349	\$4,725,975	\$5,073,567
Mail Revenue .....	378,302	352,597	844,225	412,417	413,784
% Mail of total .....	8.6%	9.2%	17.4%	8.7%	8.2%
<b>United</b>					
Total Operating Rev. ..	\$4,087,940	\$3,808,010	\$4,704,549	\$5,564,465	\$6,784,023
Mail Revenue .....	261,675	283,038	602,581	386,047	422,724
% Mail of total .....	6.4%	7.4%	12.8%	6.9%	6.2%
<b>All Domestic Trunklines</b>					
Total Operating Rev. ..	\$26,126,359	\$23,839,822	\$29,719,165	\$32,118,543	\$35,422,855
Mail Revenue .....	1,988,647	1,845,328	2,849,447	2,623,150	2,442,721
% Mail of total .....	7.6%	7.7%	9.6%	8.2%	6.9%

"I am sure," said C. R. Smith, chairman of the board of American Airlines, "that those in the industry will welcome the study proposed by the President as being constructive in intention and it offers opportunity for all to work together and find the answers which will permit U. S. air transportation to be maintained on a level of good strength and efficiency."

Warren Lee Pierson, chairman of the board of TWA and Sigmund Janas, president of Colonial, were others who publicly endorsed the President's move.

Time would tell to what extent RFC would recommend that it get into the airline financial picture. To date it has only one outstanding loan involving an air carrier—Western Air Lines.

New legislation passed by the 80th Congress gave RFC the needed authority for doing something if it felt this course should be followed. This legislation states that "the corporation is authorized to make loans to air carriers engaged in air transportation under the Civil Aeronautics Act upon approval by the Civil Aeronautics Board."

Thus the team play which has been suggested by President Truman in the overall study has a legal basis in the new language written into the Reconstruction Finance Corporation Act.

#### MAIL PAY

### AA Suggests New Formula

In addition to telling CAB its proposed "Big Five" mail rate was inadequate, American Airlines in answer to the Board's show cause order last month proposed an entirely new method of computing mail pay based on space as well as weight factors.

Calling attention to alleged deficiencies in CAB's proposed ton-mile mail pay formula, American's answer said the Board formula does not recognize the fact that mail is a preferred service and does not allow for the "substantial amount of weight and space which must be reserved for the mail in addition to the actual amount of weight carried and space utilized in such carriage."

It explained that there is no consistency in the day-to-day volume of mail load on particular operations, and that because of this fluctuation it is impossible to anticipate and plan for the actual mail load that will be carried on a given flight over a given segment for a given day with any reasonable degree of accuracy. This, it was contended, "prevents the carrier from utilizing fully the space not actually employed in carrying the mail but in fact reserved for the mail and—in the truest sense—devoted to the mail."

Actually, on this basis, the answer continued, the cost of carrying the mail "would amount to approximately one dollar per ton-mile of mail carried," instead of the 65c per ton-mile proposed in CAB's show cause order.

Another point raised by the carrier



**Flying Chuck Wagon**—That's what western-minded Western Air Lines calls the 40-passenger DC-4 it uses for charters, extra sessions and special flight operations. Converted from a C-54 at nominal out of pocket cost of \$5,000, the row of seats on the left side of the cabin face the aisle, as illustrated in the picture, and can be folded back to allow for cargo storage. On the right side of the cabin, Pullman-type sections of four seats each have been installed. The "chuck wagon's" food and beverage bar, termed the "grub shack", has a buffet cart which moves up and down the aisle for passengers to make their selections of cold cuts, beans and "mulligan stew." Western designs, such as well-known cattle brands and the stylized map of WAL's route, as shown in the picture, decorate the interior of the cabin.

was that the Board had overlooked or subordinated the effects of duplication of airline routes on a carrier's ability to reach self-sufficiency. It termed as "all-important" the extent to which services have been overlapped and the extent to which such overlapping has multiplied overheads and, by dissipating traffic and over-duplicating the airline system, prevented the development of real volume operations.

While taking no issue with CAB's proposal to treat American, Eastern, Northwest, TWA and United as a group for mail pay purposes, American did maintain that the rates proposed by CAB are too low and that American's rate should be made effective from last Jan. 1 instead of April 7, as proposed by the Board.

### UAL, EAL, NWA Object

United Air Lines, Eastern, and Northwest Airlines also objected to the CAB's proposed "Big Five" Mail Rate. They termed their proposed mail compensation inadequate and charged that the Board had erred in some of its assumptions and conclusions as to their operations.

Arguing that "it should be a matter of real concern to CAB that in a period of national prosperity and high corporate earnings, the certificated airlines generally have suffered losses or earned inadequate profits," United Air Lines called for a "realistic appraisal" of such factors as postwar conversion, increasing costs, greatly increased competition, in-

creased investments and financial losses.

United, which would receive 59.70c per ton mile under the proposed new rate, said a minimum mail rate of \$1.32 per ton mile or a maximum of \$2.15 per ton mile, depending on the method of figuring investment and revenue variables, would be "a reasonable mail rate requirement for the future."

Eastern objected that CAB had overestimated its future revenues, underestimated its expenses and required investment, and had failed to take into account many factors which in the public interest "demand a higher rate."

Attacking CAB's assumption that a 65% passenger load factor of a 55.31% overall load factor could be attained, Eastern said that nothing in the company's history or in transportation experience generally would support such a conclusion.

Asserting that its mail pay requirements for 1948 would be "a minimum of \$12,765,000," the carrier formally asked CAB to give it a rate that would return such an amount. Under the Big Five proposals, Eastern's rate would yield an estimated 68.38c per ton mile with total mail pay for "a future year" of \$2,604,000.

Instead of the 70.90c ton mile rate, Northwest asked for a 1948 break-even rate of \$1.56 per ton mile, plus at least \$1.31 per ton mile for a fair return on investment. The carrier also petitioned for an additional amount of \$2,875,770 plus fair return on investment for the period Nov. 1, 1946, through Dec. 31, 1947. CAB had said NWA's rate for this



## MANAGEMENT

period had provided adequate compensation.

Northwest labeled CAB's proposed allowance for future investment as "unrealistic," expressed regret that CAB did not recognize as an allowable cost item the expense incurred "in the development of new and improved equipment in an effort to attain greater operating efficiency and to lower unit operating costs," and attacked the Board's proposed finding that NWA and others of the "Big Five" have reached self-sufficiency.

The reply stated that instead of CAB's net profit forecast of \$2,331,000 for a nebulous future year, Northwest realistically forecasts a net operating loss before mail pay of \$3,434,000 for the year 1948. It also declared that the company's allowable investment as of last Dec. 31 was \$22,223,689, instead of CAB's estimated \$12,177,408.

### Air Parcel Post Begins

The Post Office Department last month took steps to assure that its own employees and those of the airlines would give preferential treatment to domestic air parcel post, which was to go into effect Sept. 1.

A memorandum issued by the Post Office directed that domestic air parcel post must be given the same handling as air mail, and asked that regional postal superintendents report all instances of failure of the carriers to comply.

"Air carriers . . . will be required to give air parcel post while in their custody and in transportation by aircraft the same preferential treatment now required for air letter mail," read the memo, which added: "Success of this new service and the extent of its use by patrons will depend on its expeditious handling."

Air parcel post, as defined by the Department, includes all mail matter, whether sealed or unsealed, weighing more than 8 ounces but not exceeding 70 pounds, and not exceeding 100 inches in length and girth combined.

Rates for the new service will be prescribed by zones, similar to surface parcel post, beginning at 55c for the first pound and four cents for each additional pound in Zones 1 and 2, up to 80c for the first pound and 65c for each additional pound in Zone 8; except that mail of the first class weighing more than eight ounces sent by air shall not be less than 3c an ounce or fraction thereof. Registry, insurance and c.o.d. services will be available on air parcel post.

Domestic air mail up to and including 8 oz. in weight will remain at 5c an ounce or fraction thereof, regardless of distance or zone, until the 6c rate goes into effect next Jan. 1.



Carleton Putnam  
Retires from C&S Presidency

### Stewart Named C&S Head

After 15 years as president, board chairman, and voting trustee of Chicago and Southern Air Lines, Carleton Putnam felt that the time had come for a division of top management responsibilities. On Aug. 19, Putnam, who had founded the airline in 1933, resigned as president and announced that Sidney A. Stewart, executive vice president for two years, had been elected to succeed him.

Putnam continues as chairman of the

board and a voting trustee of the company, and will move his personal headquarters from Memphis to Washington later in the fall.

Prior to joining C & S, Stewart was a vice president of United Aircraft Corp., serving as general manager of its Hamilton Standard Propeller Division from 1940 to 1946.

In announcing his resignation, Putnam stated that he would continue as fully as before his active interest in the line, "particularly in its public and government relations in both the domestic and foreign field, matters involving new routes and rates, stockholders relations and financial policy. With this in view I shall move my personal headquarters to Washington later in the fall, but shall spend a substantial number of days each month in Memphis and on the system."

Putnam said he had been considering the step for some time but that a "pardonable sentiment" had led him to wait until the line's Caracas route was opened, its Kansas City-Memphis route reaffirmed, foreign and domestic mail rates set on a fair basis, and six months of profitable operations on the record. "With all of these objectives achieved," he said, "a new era in our operations can begin."

### EAL Buys 5 More Connies

After careful investigation and tests of presently available types, Eastern Air Lines apparently has abandoned plans to buy new twin-engined craft at the present time for replacing its 51 DC-3's. Capt. Eddie Rickenbacker, EAL president, on Aug. 18 announced that the company has purchased five more 60-passenger new-type Lockheed Constellations for delivery in early fall of 1949. The order will bring EAL's Constellation fleet to 20.

The announcement explained that "the superior performance of the new-type Constellation and its ability to handle practically local schedules and long-range non-stop flights promotes economical operation and flexibility of use."

EAL has 18 DC-4's, in addition to the Constellations and DC-3's.

### Behind in Interchange

The airlines are "two or three years behind" in equipment interchange, C. R. Smith, chairman of the board for American Airlines, declared in Los Angeles last month.

Smith said that American had sought to make an interchange agreement with Delta for one-plane service between Los Angeles and Miami with stops at Dallas and Atlanta, but Delta had declined because it hopes to get a southern transcontinental certificate of its own. Similarly, he said, American had proposed an interchange with Delta for service from Los Angeles to Dallas to New Orleans, with an extension from



**Adding Parcel Post—**With inauguration of domestic air parcel post coming on Sept. 1, United Air Lines Stewardess Ann Francis adds the designation to stabilizer of a Mainliner. Under the new service, packages up to 70 pounds in weight for the first time can be transported by air and delivered to the door by the postman.



"...and all I did  
was...call the  
Businessman's  
Airline"



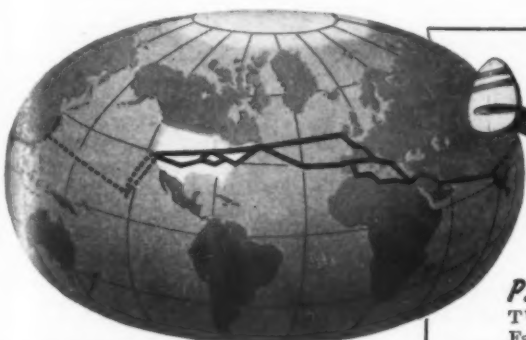
"It was almost quitting time when the boss learned he had to be across the country in the morning. What a rush! Thank goodness I had read that TWA ad about convenient schedules for business travelers."



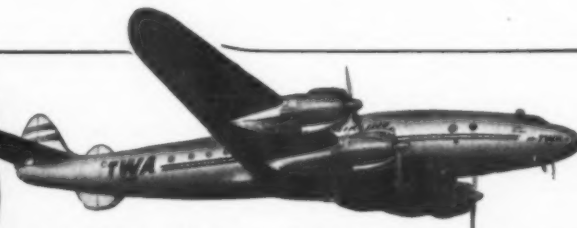
"The next day he *wired* me, and was I proud! 'WONDERFUL TRIP. GOOD FOOD AND SERVICE. ARRIVED WITH TIME TO SPARE. MEETING WENT OVER BIG. THANKS FOR THINKING OF THE BUSINESSMAN'S AIRLINE.'"



"I've never seen him so fresh and so untired after a long trip... and so full of smiles. 'You make *all* the reservations after this,' he said. 'I'll fly any airline you say, just as long as it's TWA.'"



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New Orleans to Miami via National, but this also was rejected.

Consolidation of ground service was declared to be economically feasible despite the experience of Willow Run. The trouble at Willow Run, he said, was caused by lack of cooperation among the airlines.

Smith stated that American's gasoline bill this year will be \$4,000,000 more than in 1947. In June, he said, American's gas bill was up \$650,000, of which \$300,000 was represented by greater usage and \$350,000 by price increases.

## EMPLOYEE RELATIONS

### Prizes for EAL Employees

Three Eastern Air Lines employees—a mechanic, a guard and a sales representative—got new automobiles recently without having to cajole a dealer or pay a premium price. For they were the three top letter-writing winners in Eastern's contest on "My Job and Why I Like It."

The letter-writing contest was one of the largest and most successful ever sponsored by a company solely for its employees. One hundred and 25 prizes valued at \$15,000 prompted 92% of the 7,110 eligible EAL employees to enter.

Capt. Eddie Rickenbacker, president of the company, saw the contest as "a step in the right direction in strengthening the ties between management and employees."

Rickenbacker declared that "the results of the contest—the interest shown in the subject and the truly honest and inspiring thoughts and convictions expressed in the letters that were chosen for winners—shows that we were right in our belief that in spite of the unrest and dissatisfaction of a minority, the great majority of American workers, as represented in Eastern Air Lines, know they are living and working under the best conditions ever known to mankind and in the best country in the world."

Top prize in the contest—a Buick four-door sedan—went to J. B. Peters, Jr., a mechanic stationed at Miami. Second prize—a Pontiac sedan—was awarded to R. W. Mahn, a guard at Miami; and a Chevrolet sedan went to the winner of third place, John W. Chambers, traffic and sales representative in Washington.

Other prizes included Frigidaire automatic washers, Frigidaire home freezers, Frigidaire master refrigerators, Westinghouse radio-phonographs, Frigidaire electric ranges, General Electric radio-phonographs, GE vacuum cleaners, portable radios, GE clock-radios, Westinghouse electric roasters, GE food mixers, GE automatic toasters, GE waffle irons, GE sandwich grills.

At a meeting on Feb. 10 J. H. Brock, director of industrial and personnel relations, presented the idea for the contest, originally developed and used by General Motors Corp. It won immedi-

### Domestic Loss Below '47

Aggregate operating loss of the domestic trunklines totaled \$11.8 millions at the 1948 halfway mark, compared with \$15.9 million at same time last year, according to official reports filed with CAB. However, unofficial reports indicated that expected summer profits failed to materialize in July for several of the larger carriers, and it was doubtful whether the current deficit would be sizeably cut during the normally good traffic season. (Delta and National figures below are for first five months of 1948 only, since June reports were not yet available.)

Airline	Operating Profit or Loss	
	Jan.-June 1948	Jan.-June 1947
American .....	\$ -4,457,287	\$ -3,279,822
Braniff .....	-448,581	-852,926
Capital .....	-1,065,484	-2,246,882
C & S .....	293,522	-604,598
Colonial .....	-154,616	-548,318
Continental .....	-3,516	-323,548
Delta .....	-705,680*	-110,228
Eastern .....	3,794,422	3,519,094
Inland .....	-11,342	23,939
Mid-Continent .....	-46,000	-106,933
National .....	-673,705*	105,709
Northeast .....	-793,065	-785,557
Northwest .....	-2,435,678	-2,147,213
TWA .....	-1,210,681	-3,414,211
United .....	-3,037,736	-4,877,140
Western .....	-910,941	-314,667
<b>TOTAL .....</b>	<b>-11,866,368</b>	<b>-15,963,301</b>

\* Figure through May, 1948 only.

ate approval, and Paul H. Brattain, first vice president, was assigned to set up the contest.

On April 26, day after field board meetings ended, the first of a series of "teaser" posters went up all over Eastern's system. By the time of the actual contest announcement on May 3, curiosity of EAL employees was ripe, and the contest was certain to draw a large number of entries. The great majority of entries came in the last week of the contest, which ended May 31.

Judges of the contest were: John W. Studebaker, until recently commissioner of education in the Department of Commerce; Bowman Foster Ashe, president of the University of Miami; and Lloyd D. Herrold, professor of advertising at Northwestern University.

## LABOR

### AA Lays Off Mechanics

A layoff of 78 mechanics by American Airlines, attributed to a lull in passenger business, brought week-end picketing of the carrier's ticket offices at La Guardia airport by members of Transport Workers Union on Aug. 14.

The picketing started on orders of Michael J. Quill, international president

of TWU, who claimed that the move was "the first step in a break between the union and the company that may lead to strike action on the entire system within a few days." The union leader had stated that pickets would be placed at the Airlines Terminal at 42nd Street and Park Avenue, and later at Washington, Tulsa, Boston, Chicago, Ft. Worth, Los Angeles, and Mexico City.

C. R. Smith, chairman of the board of American Airlines, declared that "the union policy is 'no layoff.'" Their idea is that American Airlines must provide employment whether or not there is work to be done. If American Airlines should adopt this policy, we would be out of business in less than one year. The policy would not only bankrupt American; it would bankrupt any company in any line of business. The net result would be that all would be out of jobs."

The men laid off had received a week's notice and were told that they would be re-employed as soon as business justified their recall, according to Buell Patterson, director of public relations.

American management and TWU Local 501 were meeting last week in an attempt to mediate their differences.

### Florida, ALPA Agreement

The number of airlines whose pilots are represented by the Air Line Pilots Association (ALPA) was boosted to 30 last month with the signing of a contract between ALPA and Florida Airways. Trans-Texas and Challenger pilots had signed up a month earlier.

The Florida Airways contract, which was made retroactive to Aug. 1, provides for the continuance of existing salary scales and working conditions and for a slightly larger allowance for meal expenses for pilots away from their base overnight. Taking part in the negotiations were J. S. Bumby and M. A. Austill, representing captains, L. E. Tew, Jr., representing co-pilots, and Karl J. Ulrich, of Chicago, representing ALPA.

### TWA, ACEA in Agreement

An agreement covering higher rates of pay and new working rules for approximately 500 radio and teletype communication workers in TWA's International Division has been signed by the carrier and the Airline Communication Employees Association (CIO).

**15 Years for NEA:** On Aug. 11, 1933, National Airways, on behalf of Northeast Airlines (then Boston and Main Airways), opened scheduled air service between Boston and Bangor via Portland, Rockland and Waterville. Last month, Northeast marked the 15th anniversary of the occasion by holding open house at its headquarters at Logan International Airport in cooperation with the airport management.

# Salesmanship Needed to Push Air Cargo, Shipper Asserts

By WAYNE W. PARRISH

Ever hear of A. M. Anzick?

If you haven't, you will. And if you're in the airline business, you ought to know him. He's a tonic for the blues, for he's a first class salesman.

Anzick is a shipper. He's the biggest booster for air cargo in the country. And he thinks the airlines are falling far short of the job on developing the air cargo end of their business.

This writer ran into Anzick at Denver recently during a Continental Air Lines' sales meeting. It seems that CAL wanted to hear an outsider give a pep talk on air cargo—and they got what they wanted. This man Anzick is as expressive as any salesman in the nation.

For background purposes you should know that Anzick and his associate, C. E. Davis, traveled widely in the west as salesmen for trucks. They noticed that each region produced something different and that surface shipping couldn't do the job of transportation because much of these "different" products were perishables. They figured out that by proper packaging and reasonable rates, this stuff could move by air in great quantity.

So Anzick and Davis set up Airborne Perishables, Inc. at Stapleton Airfield in Denver and made themselves president and secretary-treasurer respectively. On their stationery they use a slogan. "A Service as New as Tomorrow" and at the top appears the following: "So the nation, through the magic of air transportation from source to market, may enjoy fine foods and flowers at the peak of freshness, economically."

**Buys and Sells.** Airborne Perishables is not a freight forwarder. It buys and sells everything it ships. And it is a two-way operation in that it brings into Denver the things like shrimp, lobsters and marine fish which Denver doesn't have, and it ships out of Denver such delicacies as rainbow trout, Pascal celery and Rocky Ford cantaloupe, which the rest of the country would sure like to have if it could get them.

Anzick and Davis set up their shop, but they have had their troubles getting the scheduled airlines to recognize the air cargo potential. One by one the problems are being solved but for a time the airlines couldn't advise when shipments would arrive, and, as Anzick says very frankly, "they just lied to us."

The first airline to cooperate to a close extent was Continental for which John A. Smith, CAL's cargo manager, takes the credit. But the other companies are beginning to catch on, for



A. M. ANZICK, president of Airborne Perishables, Inc., received ready cooperation from John A. Smith, cargo manager of Continental Air Lines, in his drive to develop the air cargo potential in perishables.

Anzick is a bigger customer every month.

"Air transport is a great story if people will get behind it," he says. "The glamour left this business with Pearl Harbor. If you don't believe it, go to any airline terminal and take a look at the cross-section of America using the service."

"But air freight is the real answer to the airline business. There are lots of commodities that can't be flown, but there are many thousands that can be. The weakest link now is in the selling end. The airline boys aren't coached and trained to sell. They don't know what they're trying to sell. The airlines haven't taken air cargo seriously enough."

"Many shippers have been disappointed because the shipment took longer by air than by surface. Ground deliveries have been very slow, and freight is often thrown off the planes at intermediate stops as though it were of no special value. The rates are low enough for volume cargo if ground delivery can be worked out."

**Two-Way Traffic.** Anzick has shipped over 150,000 mountain trout from Denver to points all over the country. In 11½ months he moved 84,000 lbs. of perishables on the major airlines. He thinks he's only made a small start if the airlines will cooperate, and he points out that his business is both in and out, so he avoids the one-way handicap which has been a bane for the airlines.

"It's too easy to hold a job with the airlines," he says about the personnel.

"Too many airline men have too many sideline jobs and activities." Asked what he meant, he said airline companies don't watch their employees close enough and many employees have other incomes which distract from their main jobs.

At the Continental Air Lines sales meeting Anzick talked on "Step Out and Sell." Here is what he told them:

"For some unexplainable reason there are many people in high places throughout much of the air transportation industry who fail to recognize the vast potential in the field of air freight and air express. Because of this apparent lack of interest and foresight on the part of some, the aggressive, visionary regional carriers, and there are a few in this country, are the ones who are the most heavily affected and thus are stymied in putting into force a workable, profitable cargo operation which would ultimately benefit the American people. If the airlines of this country are to fulfill their obligation as a public utility, the American people must and will be served."

**Salesmanship Needed.** "A SELLING JOB LIES AHEAD. It will have to be a bigger and better selling job than the industry has ever launched before. Those airlines who are cognizant of the vast possibilities in the air cargo field must by their own boot straps pull themselves above the laggard and indifferent airlines and prove to them that it can be done."

"To accomplish this the industry must take heed of the past and avoid making the mistakes that have been altogether too frequent; such as airlines of national importance who suddenly decided to get into the freight business and who felt that all they had to do was to add one or two more cargo planes to their fleet then sit back and issue orders and directives to their various sales and traffic departments instructing them to get the business, only to fizzle out pitifully, making themselves as well as the entire industry look foolish."

"To invade the cargo field successfully it will require much more than adding a cargo plane or two. Actually the planes themselves are of little value, not much better than ox-carts, unless adequate ground facilities are provided plus know-how to handle freight backed by an intelligent sales and traffic department that can go out and sell the right kind of service and obtain the type of freight than can best be handled by air. As in any field of endeavor first things must come first—salesmanship, traffic, ground facilities and know-how."

"It is the opinion of many well-versed in the transportation field, both surface and air, that the airlines would do well to place more emphasis on cargo in the gift field class because of the small, compact, easy to handle commodities that are generally found in gift package form, thus enabling the airlines to acquire the know-how in the handling of freight, to build up their ground facilities



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that would one day enable them to expedite bigger and better payloads profitably.

"When speaking of aggressive, visionary airlines one cannot fail but look upon Continental Air Lines with favor for it should be stated here most emphatically that its history has been one of real pioneering achievement coupled with sound business practice. The very fact that Continental a long time ago saw merit in the gift freight field and provided its sales and traffic department with a special air express commodity rate thus giving to those departments the necessary tools with which to get the job done proves without question their vision and foresight.

"Special rates, ground facilities, and the last word in airplanes in themselves are fine, but without a well-versed, informed, industrious sales organization they are of little value. It must be recognized without hesitation that anyone associated with an airline sales or traffic department is selling service and nothing more.

**Importance of Service.** "The airlines have only service to sell—the planes of one airline will travel from place to place just as quickly as the planes of another airline. The competition among airlines is to see whose employees can smile more sincerely, be more courteous, and give better service to more people.

"The airlines will learn that revenue derived from hauling goods, raw or manufactured, is revenue; and money derived thereof is just as good as money obtained in hauling people from one place to another. After all, in the final analysis are not people just another form of live freight? However, it is definitely more difficult to sell a prospective shipper the idea of using the service of your airline than it is to sell a passenger ticket to someone who must make a hurried trip. To sell the shipper your service one must have the know-how.

"It seems to be a general practice that the airline sales representative in making his calls states that he knows of a prospective shipper in some distant city who has an agricultural commodity he wishes to move, but with apologies goes on to state that he himself is not in the produce business but is engaged solely in the transportation business. This condescending attitude to do a favor for his prospective shipper reveals all too clearly that he is not too deeply entrenched in the air transportation business either for he fails to see that he is selling service and nothing more. No one cares or expects him to be in any business other than transportation.

**So Easy It's Difficult.** "Someone once said that selling is such an easy job that it is actually difficult. In a sense that is true. One cannot stand still in the great profession of selling. Either we go forward or we go backward. You can be above average, average, or below average, the choice is up to the individual.

"It is difficult to find patience with those who think that freight moved in large quantities by air is 20 years away. The time to begin is now. The industry has arrived—it's here! It wants to go places, but it will take tremendous sales effort to get into high gear.

"The same selling techniques that apply to all industries whether they are food, clothing, automotive, or what have you, also apply to selling the airline service and the techniques are simply these: (1) You can sell any service your airline has to offer provided it really gives the buyer satisfaction and service. (2) Salesmanship is nothing more than organized persuasion. (3) The number of sales you make depends upon how many people you contact and how often you contact them. It is the old law of averages. You can't beat it.

"Conversation is the salesman's ace in the hole. The more conversations there are, the more business you will get. The more conversations that go wrong, the more business you will lose. Never forget a customer and never let a customer forget you. For the industry to grow and flourish it must always be remembered that only salesmen can contact the people who may wish to buy the service it has to offer. Only salesmen and salesmanship can produce the thousands upon thousands of orders needed to provide a stabilized economy within the air industry.

"Those of you who are fortunate enough to be serving in the sales and traffic divisions of your company today will one day be guiding the destinies of your company provided that you are today applying yourselves honestly and diligently. The future in aviation is indeed a bright one. It has only begun.

"Companies such as mine can be of great value to the overall aviation picture. We can assist the airlines in many ways. We can in time through our efforts impress upon other industries the importance of packing and packaging properly for air shipping. We can help to develop markets for all types of perishable commodities, particularly luxury items, and can be of assistance in innumerable ways to numerous to mention at this time."

All of this adds up as follows: If you want to get a pep talk with an ample sprinkling of salt and pepper, just pay a call on A. M. Anzick at the Denver airport.

## CAB CALENDAR

Sept. 13—Oral argument in the Air Freight Case. (Docket 810 et al.) 10 a.m., e.d.s.t., Room 5042, Commerce Building.

Sept. 27—Hearing in Free and Reduced Rate Transportation Case. (Docket 2737 et al.) Postponed from Sept. 13. Place and hour to be announced. Examiner Barron Fredricks.

Sept. 29—Oral argument in TACA, S. A. Foreign Air Carrier Permit Renewal Case. (Docket 3016). 10 a.m., e.d.s.t., Room 5042, Commerce Building. Postponed from Sept. 2.

Oct. 4—Hearing on route consolidation proposals of Trans World Airline. (Docket 2581 et al.) Tentative.

## Aviation Calendar

Sept. 2-4—Flying Farmers Association, national convention, Ohio State University, Columbus, O.

Sept. 4-6—National Air Races, Cleveland.

Sept. 4—Reunion and banquet of Early Birds, Cleveland.

Sept. 12—Oakland Aviation Day, Municipal Airport, Oakland, Calif. (Sponsored by Oakland Junior Chamber of Commerce.)

Sept. 13-17—National Instrument Conference and Exhibit, Convention Hall, Philadelphia. (Sponsored by Instrument Society of America, Pittsburgh.)

Sept. 18—Nationwide observance of Air Force Day.

Sept. 19-21—Northwest Aviation Planning Council 12th international convention, Vancouver, B. C.

Oct. 6-8—National Association of State Aviation Officials annual convention, Copley Plaza, Boston.

Oct. 6-9—SAE National Aeronautic Meeting and Aircraft Engineering Display, Biltmore Hotel, L. A.

Oct. 14-16—Air Line Dispatchers Assn. convention, Edgewater Beach Hotel, Chicago.

Oct. 17-21—National Aviation Clinic, Detroit.

Oct. 18-23—American Society of Travel Agents convention, Savannah, Ga.

Oct. 18—Personal Aircraft Council meeting, Detroit.

Oct. 20-21—Air Transport Section, National Safety Council, Hotel Stevens, Chicago.

Oct. 22-23—Fourth annual Arizona Aviation Conference, Prescott.

Oct. 25-26—Third Annual Indiana Aviation Conference, Purdue University, Lafayette, Ind. (Sponsored by Purdue School of Aeronautics, Indiana Aviation Trades Association, Indiana Aeronautics Commission.)

Nov. 15-17—National Aviation Trades Association, annual meeting, Hotel Allerton, Cleveland, with joint meetings and trade show with ADMA.

Nov. 15-17—Aviation Distributors and Manufacturers Assn., annual meeting, Hotel Statler, Cleveland.

Nov. 16-18—National Association of Travel Officials annual convention, Miami Beach, Florida.

Dec. 2-5—Fourth annual International Aviation Celebration, El Paso.

Dec. 17—Annual Wright Brothers Lecture, Institute of the Aeronautical Sciences, at U. S. Chamber of Commerce, Washington, D. C.

## International

Sept. 7—ICAO Council opens fifth session, Montreal.

Sept. 7-12—Society of British Aircraft Constructors show, Farnborough.

Sept. 8—ICAO Air Transport Committee, Montreal.

Sept. 9—ICAO Air Navigation Committee, Montreal.

Sept. 9—IATA Legal Committee, Brussels. (Date tentative.)

Sept. 13—IATA Executive Committee, Brussels.

Sept. 14-18—IATA Fourth Annual General Meeting, Brussels.

Sept. 14-18—ICAO Informal Aerodrome Lighting Meeting, London.

Sept. 20—IATA Executive Committee, Brussels.

Sept. 24—ICAO Legal Committee meets on new insurance convention, Lisbon.



# Irregular Carriers Heavily Divert Traffic from Airlines

Diversion of business from certificated air carriers by non-scheduled, charter and contract operators has by no means been confined to domestic air routes, according to a study compiled by the Economic Research Department of the Air Transport Association for the consideration and guidance of its International Committee.

The report showed that 48 operators under the three CAB classifications of non-certificated carriers—292.1 and 292.5 and Section 6—were operating in the Caribbean area last January and February, when the study was made, and that 14 such carriers operated between the Pacific Northwest and Alaska and several others between the U. S. and Europe.

Such information as was available to the compilers of the report indicated that the traffic diverted to these "irregulars" would amount to millions of dollars annually.

For example, of the 8,569 passengers flown between New York and Miami and San Juan in both directions last February, 3,338 passengers, or 39% of the total, were transported by 12 U. S. irregular carriers operating in direct competition with Pan American Airways and Eastern Air Lines. Had these passengers flown with the two certificated carriers, PAA would have had additional revenues of more than \$300,000 and EAL's February passenger revenues would have been boosted by approximately \$65,000.

**Critical of Policy.** The report was sharply critical of CAB policy of exempting U. S. carriers under Economic Regulation 292.1 and thus enabling them to divert substantial revenue traffic from Pan American, which is compelled to ask for increased mail pay because of insufficient passenger business on its Latin American Division.

"Thus an unregulated system of transport is permitted to develop alongside of the regulated one," said the report, "and to inflict some degree of economic harm upon the latter."

Admitting that the available data did not permit an accurate determination as to how great the impact of this condition upon the regulated carriers has been, the report suggested:

"It would require a much wider investigation by a body with authority to compel answers to yield such material. The case would seem to justify a general investigation by the Board—similar to investigations conducted by the Interstate Commerce Commission."

With reference to the non-certificated cargo carriers operating under 292.5, it

was recommended that no action be taken on this group, inasmuch as this exemption situation would disappear with the determination of their pending applications for certificates of public convenience and necessity. Upon such determination, it was pointed out, their status would become that of certificated scheduled carriers, or they would revert to 292.1 or to contract carrier status.

With reference to irregulars carrying passengers under 292.1, it was recommended that such irregulars operating under the U. S. flag and using larger aircraft such as the DC-3, DC-4 and C-46 be required to prove that public convenience and necessity requires the type of service they offer, and that existing certificated carriers have shown themselves to be unable and unwilling to perform such service. Present exemptions accorded them under 292.1 should be revoked, it was stated.

Foreign-flag carriers would be required to secure a permit, as would be the case of any foreign-flag scheduled carrier, under Sec. 6(c) of the Air Commerce Act of 1926, as amended.

**Tough Contract Problem.** Contract operators pose a special problem, of which the report had this to say:

"The appropriate recommendation would seem to be regulation of contract carriers in foreign air transport, but minus minimum rate control. However, this involves this situation: How can

the United States adopt a scheme of contract carrier regulation in this area unless other nations occupying an important place in international air transport will also adopt this policy? This suggests the possibility that the issue may have to be battled out before the International Civil Aviation Organization prior to any attempt at legislation to that effect in the United States."

Touching on the cargo aspects of the situation, the report stated that a substantial amount of cargo is being handled by the irregular carriers, especially in the Caribbean and North Atlantic areas, and most of this cargo is of types carried by the certificated airlines. A constant and appreciable decline of monthly cargo ton-miles of operation of the certificated carriers over a seven-month period starting last August was attributed for the most part to the collective action of the irregular air carriers.

It is evident, the report said, that in several cases the permits issued have authorized repetitive services which seem to approach those of a scheduled regular route carrier, and the lack of regulations covering the contract carriers enables those carriers to operate under a system that is nothing more than a subterfuge for common carrying.

The success of the irregulars, it was stated, rests primarily upon rate-cutting. Fares of the U. S. irregular air carriers between Miami and San Juan, for example, were shown to be from \$13 to \$24 less than those of PAA and EAL, and the differential between the two types of carriers in the New York-San Juan fare was shown to be \$56 to \$73.

Furthermore, the report suggested, some of the irregulars apparently are guilty of violations of the regulations under which they operate or of circumvention of such regulations through

## Passenger Traffic—New York-Miami and San Juan U. S. Irregular Air Carriers, Feb. 1948

(Number of Passengers Arriving or Departing from San Juan)

Name of Carrier	New York to San Juan	San Juan to New York	Miami to San Juan	San Juan to Miami	N.Y./Miami to San Juan	San Juan to N.Y./Miami	Total
American Export & Import Corp.	81	123	....	....	....	....	204
American Air Transport	....	....	....	....	204	177	381
Argonaut Airlines	....	....	....	73	....	....	73
All American Airlines	....	....	25	38	....	....	63
Continental Charters	....	....	....	293	....	....	293
Latin American Airways	....	....	17	197	....	....	214
Modern Air Transport	157	51	....	....	....	....	208
Peninsular Air Transport	....	....	104	137	....	....	241
Saldana Airlines	....	....	....	81	....	....	81
Trans Atlantic	....	....	....	....	211	158	369
Trans Caribbean	....	....	....	....	296	578	874
Virgin Islands Scenic Airways	....	....	....	....	110	227	337
<b>TOTAL</b>	<b>238</b>	<b>174</b>	<b>146</b>	<b>819</b>	<b>821</b>	<b>1,140</b>	<b>3,338</b>

## Certificated Airlines, Feb. 1948

Eastern Air Lines and Pan American Airways	1,452	1,444	1,139	1,131	25	40	5,231
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devious means. One example cited was that of a carrier authorized to transport property only between the U. S. and foreign points which picked up passengers on westbound flights, transferring them at Bermuda to certificated carriers for the remaining portion of their flight.

The report expressed the hope that ICAO would work out a solution of the problem with regard to the foreign-flag irregulars, and that the U. S. carriers be handled "by the revocation of the exemption of the large irregular carriers and by vesting the authority to regulate contract carriers in the CAB."

## PRIVATE TRANSPORTS

### 1,000-Plane Business Fleet

If any doubts had existed as to the widespread use of company-owned transports for business purposes, such doubts should have been dispelled last month with the disclosure by the Corporation Aircraft Owners Association that more than 1,000 multi-engine civil aircraft are now owned and operated by some 800 private business corporations in the United States. Hundreds of single-engined craft, such as the Beech Bonanza and Ryan Navion, are also in use as company planes.

Used initially only for the transportation of top company executives, the industry-owned aircraft gradually were allotted for use also by sales departments, and finally have come to be used in many instances for the movement of goods consigned to hard-to-reach places or wanted in a hurry.

A survey conducted among users of these executive-type aircraft showed that the main purpose of 64% of the owners was to save time, while 30% liked the convenience of reaching off-line points, 22% favored the aircraft primarily for their economy and utility, and some liked the prestige the ownership and operation of a plane gave to the company.

The CAO, organized in 1946, held a one-day meeting in Washington last month to make known to government departments, the aircraft industry and service operators its requirements for safe and efficient operation of executive aircraft. Those attending called upon aircraft manufacturers to give consideration to the development and construction of an aircraft especially designed to meet the needs of executive type flying and called upon the government for improvements in aids to navigation.

**Dual Market.** On the first point, Leddy Greever, administrative assistant-sales, for Beech Aircraft Corp., assured CAO pilots and owners that manufacturers today seek dual markets for their products and mentioned the Beech Twin-Quad, now under construction, as a type of plane which could service both feeder airlines and executive users.



**Executive Transport**— One of the more than 1,000 multi-engined transports now in use by more than 800 firms for business purposes is this B-17 Flying Fortress recently restyled for Col. Robert McCormick, owner and publisher of the Chicago Tribune. All restyling was done by AiResearch Aviation Service Co.

F. B. Lee, deputy administrator of the CAA, offered the help and assistance of his agency whenever it could be utilized. Lee said it was recognized that purely personal and pleasure flying alone could not support a live personal aircraft manufacturing industry, and that the executive transport field offered a potentially broad new market.

He explained CAA's program for development of new aids to navigation, including the installation of omni-directional radio ranges which would be of special benefit to the executive type of air transportation.

In offering industry cooperation to the new association, Joseph T. Gueting, Jr., manager of the Personal Aircraft Council of the Aircraft Industries Association, expressed the view that the experience of CAO members "will provide a tremendously important basis for determining year by year improvements in the normal evolutionary manner which typifies all comparable American products."

Executives of CAO said the next conference would be organized on a basis where all phases of industrial flying would be explored, including exchange of information on cost data.

William B. Belden, of Republic Steel, is chairman of CAO, and Palmer Lathrop, of Bristol-Meyers, is secretary.

## NEW ROUTES

### Robinson Starts Sept. 15

Robinson Airlines, Inc., of Ithaca, which since 1945 has operated a successful intrastate air service in New York State, plans to begin operations as a certificated airline in about two weeks. Inaugural flights on the company's certificated Route AM-94 will be made on or about Sept. 15 between Niagara Falls, Buffalo, Rochester, Ithaca, Triple Cities (Binghamton, Endicott and Johnson City), Middletown and Teterboro Air Terminal.

On or before Nov. 1, service will be extended to link Ithaca, Elmira-Corning, Triple Cities and Albany, and a short time later to link Ithaca and Syracuse.

Three round-trips will be flown daily between Ithaca and Teterboro, and two round-trips daily will be provided, initially, to Albany, Syracuse, Rochester and the Niagara frontier cities. DC-3 equipment will be used.

### Resort Airlines Favored

In his report in the so-called Sky-cruise Case, CAB Examiner James S. Keith recommended that Resort Airlines, Inc., of Pinehurst, N. C., be awarded a temporary five-year certificate authorizing transportation of passengers and their luggage between the co-terminals New York, Philadelphia, Washington, Pittsburgh, Cleveland, Detroit and Chicago and intermediate points in the U. S., the Caribbean area, Central America, Mexico and Canada. He recommended denial of a similar application of American Air Export and Import Co.

It was urged that the certificate be subject to several conditions, one being that round-trip transportation only should be sold, another that the transportation be sold as a complete all-expense escorted tour, and a third that local traffic not be carried between the terminal points listed.

The examiner said the proposed service "does not envisage a broad invasion into the field of air transportation, but more or less seeks to exploit a comparatively limited travel market through the introduction of a specialized service."

He concluded that "the present arrangements between the certificated airlines and the travel agencies do not fully exploit the conducted tour market, and that a service which imposes upon the carrier itself the responsibility for promoting and operating . . . tours would further stimulate the exploitation of this market."

## Cruising Range Doubled

To take a 3,000-mile bomber and double its effective range without structural modification to the airplane seems like a pretty large order. Yet this is precisely what Gen. George C. Kenney and his Strategic Air Command have been able to do to the Boeing B-29 Superfortress.

Back in the spring and summer of 1945, when the B-29's were busy blasting the Japanese loose from their islands, 3,000 miles was considered to be just about the extreme limit of the B-29's range. But engineers of Boeing Airplane Co. realized that the B-29's potential range was not being fully utilized and they approached the Air Force with a few suggestions.

For one thing, they said, Air Force pilots had a habit of flying the plane in a partial stall, with its nose higher than the normal horizontal axis, thereby using additional wasted power. This habit is due to the peculiar configuration of the B-29—when actually flying level it appears from the cockpit to be in descent. The Boeing people made several more suggestions dealing with power application and engine efficiency.

**Testing Begins.** After Air Materiel Command had looked into the possibilities of range extension for a few months and had come up with a several-pound tome on suggested procedures, Kenney's Strategic Air Command put their theories into practice.

Last week, just a little more than two years after SAC began its tests, a B-29 took off from MacDill Air Force Base, Tampa, Fla. with an "effective" bomb load of 10,000 pounds, flew across the continent and out into the Pacific Ocean, dropped the bomb load, and returned to MacDill—a round trip of 5,792 miles. Not only that, but the plane returned with 317 gallons of fuel in its tanks—roughly enough to make the maximum potential range slightly over 6,000 miles.

The method by which this miracle, of range extension was accomplished is a system known as "cruise control," a system which takes into consideration the changing flight conditions during a long range mission—changes in weight, altitude and weather.

Power settings are adjusted accordingly, by reference to a series of charts which indicate the optimum power setting for a given set of conditions. In addition to power control, SAC crews employ other methods of fuel conservation, such as pressure pattern navigation, proper load balance throughout the flight, improved cooling systems for cylinder head temperature reduction and improved fuel injection systems.

In last week's flight, a gadget new to military operations, known as a torque-meter, made its appearance. The torque-meter has probably been the most important development in the range extension program. It is a device which measures the torque, or twisting moment, delivered by the propeller shaft,



**All-Weather Operation—**'Round the clock and in all kinds of weather the Berlin air lift goes on. In the above photo, Air Force planes are being unloaded at Tempelhof Airdrome, Berlin, after a night flight from Frankfurt. Below, C-47's are being unloaded at Tempelhof after a GCA landing in extremely bad weather. A giant Douglas C-74 has now joined the air lift and is carrying 25 tons of cargo per mission into Berlin. The combined Air Force-RAF effort has now topped 5000 tons daily, as two-engined craft are gradually being replaced by four-engined planes.

permitting the calculation of the exact brake horsepower output. Through use of the torque-meter flight engineers are able to adjust the power settings to within a few horsepower of the most efficient BHP rating as listed on the charts, rather than adjust by use of the manifold pressure gauge, which is only an approximation. Over a long flight the resultant fuel saving is tremendous.

It is logical to assume, with the excellent results obtained on the B-29, that a range extension program with the B-50 will boost its range considerably higher than its present rated 6,000 miles. And the B-54, which is the new designation for the B-50C, powered by Pratt and Whitney R-4360 VDT compound engines permitting a 20% reduction in fuel consumption, will be capable of even greater range. It is quite possible that Kenney may some day achieve that much-publicized 10,000 mile range without building superbombers.

## Strategic Bombing Issue

The Air Force-Navy argument as to who controls strategic bombing has projected itself into Congress. A couple of months ago Rep. W. Sterling Cole (R., N. Y.), inserted in the Congressional Record a copy of an article written by a Naval Reserve officer named Richard Essex. Essex rather vehemently accused the Air Force of conducting "a vicious propaganda campaign to identify itself as the exclusive proprietor of American air power." He goes on to

extol the supremacy of carrier-based aircraft over land-based aircraft and in general argues that the Air Force might as well be eliminated, since the Navy has the situation well in hand.

Rep. Melvin Price (R., Ill.) came to the rescue of the Air Force. With considerably more facts at hand than had Mr. Essex, Price teed off on the Essex piece.

Essex had cited the Pacific war as an example of carrier-plane supremacy in land attack.

Essex also belittled the efforts of the B-29 in the Pacific. Price decries this. "It is unfortunate, Mr. Speaker," he says, "that the Congress would dignify, by insertion in the Record, any article presenting an evaluation of the role of air power in the Pacific which fails to even mention the B-29's." Price points out that B-29's dropped 146,000 tons of bombs on the Japanese mainland as compared to the 6,760 tons dropped by carrier aircraft.

Price's remarks in the Congressional Record present a complete and authoritative rebuttal of the Essex article, which, when it first appeared, caused quite a stir in Air Force Headquarters. At his own expense, Price had printed a large number of copies of his rebuttal, which are now being distributed to his constituents, to aviation writers and to other interested parties. The Air Force is now in possession of a copy and it is not illogical to assume that the circulation of the Price essay is due for a big jump.

JAMES J. HAGGERTY, Jr.



## PERSONNEL

### ADMINISTRATIVE

**E. O. Cocke**, vice president in charge of traffic for Trans World Airline, has been elected to board of directors of the company. Cocke has served nearly 20 years with TWA and its predecessor company, Transcontinental Air Transport.

**Andrew M. de Voursney** has been promoted from route development manager of United Air Lines to administrative assistant to **Curtis Barkes**, assistant to the president-finance. De Voursney has been with UAL since 1940. **Paul J. Hebard**, formerly manager of the economic research staff, has been moved up as route development manager.

**Harold D. Koontz**, former assistant to the president of TWA, has been appointed manager of airline sales for Consolidated-Vultee Aircraft Corp. He has had extensive experience in the fields of air and rail transportation, economics and government.

**Edward W. Ringo** has been appointed personal assistant to **Orvis M. Nelson**, president of Transocean Air Lines, to perform liaison duties between the Atlantic-European division and the Oakland executive headquarters. Ringo was formerly chief pilot of the company's European division.

**Selby Calkins** has resigned as public relations manager for Pan American Airways' Pacific-Alaska Division.

**Eugene D. Seraphine** has been appointed director of the news bureau of Colonial Airlines. He was at one time with the publicity department of American Overseas Airlines.

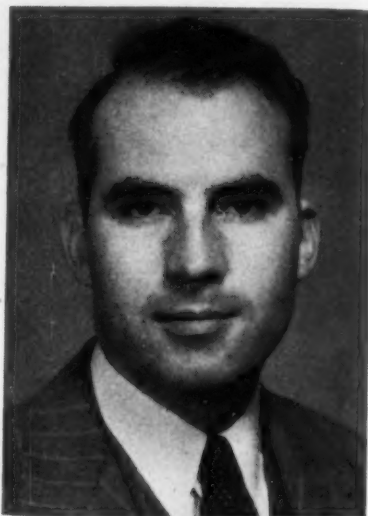
**Harmon A. Harris** has left the public relations department of TWA-International to join the New York staff of Carl Eyoir and Associates. He was public relations and advertising manager for Panagra between 1943 and 1946 and held the same position briefly with Irish Air Lines before joining TWA.

**Eldon Frye** resigned his position as director of employee publications in TWA's industrial relations division to become director of employee activities for Consolidated-Vultee. **Art Clayton**, formerly editor of the company newspaper, *Skyliner*, succeeds him.

### —OPERATIONS-MAINTENANCE—

**P. A. Birthisel**, former station manager for Mid-Continent Airlines at Bismarck, N. D., has been appointed instructor in training division at Kansas City.

**P. E. Peirce**, formerly director of in-flight service for Western Air Lines at Los Angeles, has been transferred to San Francisco to replace **John Sullivan**, who resigned as station manager there. **R. P. Ensign**, formerly coordinator of service—coastal and western divisions, takes over the L. A. post.



Ed Riederer  
Continental Traffic Manager

**John S. Winchell**, district manager for TWA at Kansas City, will become d.m. in Paris, France, Sept. 1, replacing **John W. Bailey**, who will take over at KC. **G. J. Craden** will become district manager at Cairo, Egypt, Sept. 15, replacing **Dana B. Fisher**, who is on a leave of absence. Craden's position as district manager at St. Louis will be filled by **J. Chesley Stewart**, formerly d.m. at London.



**Promoted at C-W—William C. Jordan**, (above) formerly general manager of the Curtiss-Wright Airplane Division, has been elected v.p. and appointed general manager of Wright Aeronautical Corp., Wood-Ridge, N. J. **T. B. Focke**, formerly factory manager of C-W Airplane Division, has been named general manager of that organization to succeed Jordan.

**Al Mann**, formerly assistant director of passenger transportation for WAL, has taken over the job of station manager at San Diego.

**T. K. Touw**, formerly station manager for Delta Air Lines in Chicago, was transferred to Cincinnati in the same capacity, and **Shelby Dement** has been transferred from Baton Rouge to fill the Chicago post. **Doyle Payne**, formerly chief agent at Shreveport, was promoted to station manager at Baton Rouge.

**Lloyd Ross** has replaced **James Garrity** as chief passenger agent for Western Air Lines at Salt Lake City, with Garrity assuming a similar position at San Diego.

### TRAFFIC & SALES

**Ed Riederer**, 12-year air transport veteran, has been named traffic manager of Continental Air Lines in Denver, replacing **George Rash**, who resigned effective Sept. 1.

**Herbert F. Milley** has been appointed manager of PAA's central sales region, and is being replaced as eastern regional manager by **Samuel F. Leib**, formerly with UAL and more recently with American Overseas as regional traffic manager—United Kingdom.

**Mayo Thomas** has been promoted from division freight agent to general traffic manager of The Flying Tiger Line, with headquarters at Lockheed Air Terminal, Burbank. He joined FTL in 1945 as a sales representative.

**James J. Fauteux** has been named California traffic manager for Northwest Airlines, with headquarters in San Francisco, replacing **E. G. Reynolds**, who was transferred to the general offices in St. Paul. Fauteux has held several important posts with NWA, including those of Orient traffic manager and supervisor of Orient sales.

**James P. Farrell**, traffic manager for Northwest Airlines in Japan for past few months, has been named traffic manager for China. Before joining Northwest as district traffic manager in New York last year, he had served 13 years with Eastern Air Lines. **Thomas Marshall, Jr.**, formerly district traffic manager in Spokane, has taken over the post in Japan. Marshall joined the company in 1938 and before the war was stationed in Butte.

**William W. Spradley** has been named district traffic manager for Pioneer Air Lines in Fort Worth, succeeding **Lewis Zafran**, who moved up to become regional traffic manager for West Texas.

**John B. Mallnee**, formerly city sales manager for Mid-Continent in St. Louis, has been promoted to district manager of traffic and sales.

**Keith Arnold** has been promoted from sales representative to city sales manager for Mid-Continent Airlines at Sioux City.

## PERSONNEL

**A. E. Wilcox, Jr.**, for the past two years assistant advertising manager with Northwest Airlines, has been made district traffic manager in Shanghai.

**Gordon Fairchild**, formerly with American and Colonial Airlines and active in airline sales work for a number of years, has joined Northwest Airlines' traffic department in New York.

**John W. Waddill**, who recently completed a two-year assignment for TWA in New Delhi and Bombay, has been appointed senior traffic representative for the company in Washington.

**E. M. Lepper** has been promoted from district manager at Albuquerque to passenger sales manager at Los Angeles in one of several promotions and transfers made recently in TWA's western region. **R. B. Riordon**, district manager at Denver, took over the Albuquerque post, his job at Denver being filled by **Robert F. Chambers**, former reservations manager at Los Angeles. **Thomas B. McKibben**, reservations manager at San Francisco, was transferred to Los Angeles in the same capacity, and **Joseph E. Walker** was moved up to fill the San Francisco position.

**Kendall Mau** has been named assistant to the director of advertising for WAL, replacing **Jack Vermillion**, who resigned to enter the travel agency business.

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**R. W. F. (Bob) Schmidt**, for the past six years superintendent of airports for CAA's Sixth Region, has accepted appointment as manager of Tucson Airport Authority, lessee of the Tucson Municipal Airport. A pioneer airport engineer, he began his career with Curtiss-Wright and continued his aeronautical experience with Goodyear, the Bureau of Air Commerce and United Air Lines before joining CAA in 1938.

**Chris M. Lample**, director of CAA's air navigation facilities service and a veteran CAA employee, has requested transfer to Alaska to be placed in charge of two air fields there.

**Harvey H. Dwight** has been named president of Aircraft Engine and Parts Corp., distributors of aircraft engines, parts and tools, located in New York. Dwight, a former vice president, succeeded **Ernest Snider**, who has retired from active service. **William P. Youngs**, former PAA pilot and later with Curtiss-Wright, has been elected vice president of sales.

**W. E. Zisch** has been promoted from assistant general manager to general manager of the Aerojet Engineering Corp. Zisch was one of the original group that founded Aerojet in 1942.

# Airline Commentary

By ERIC BRAMLEY

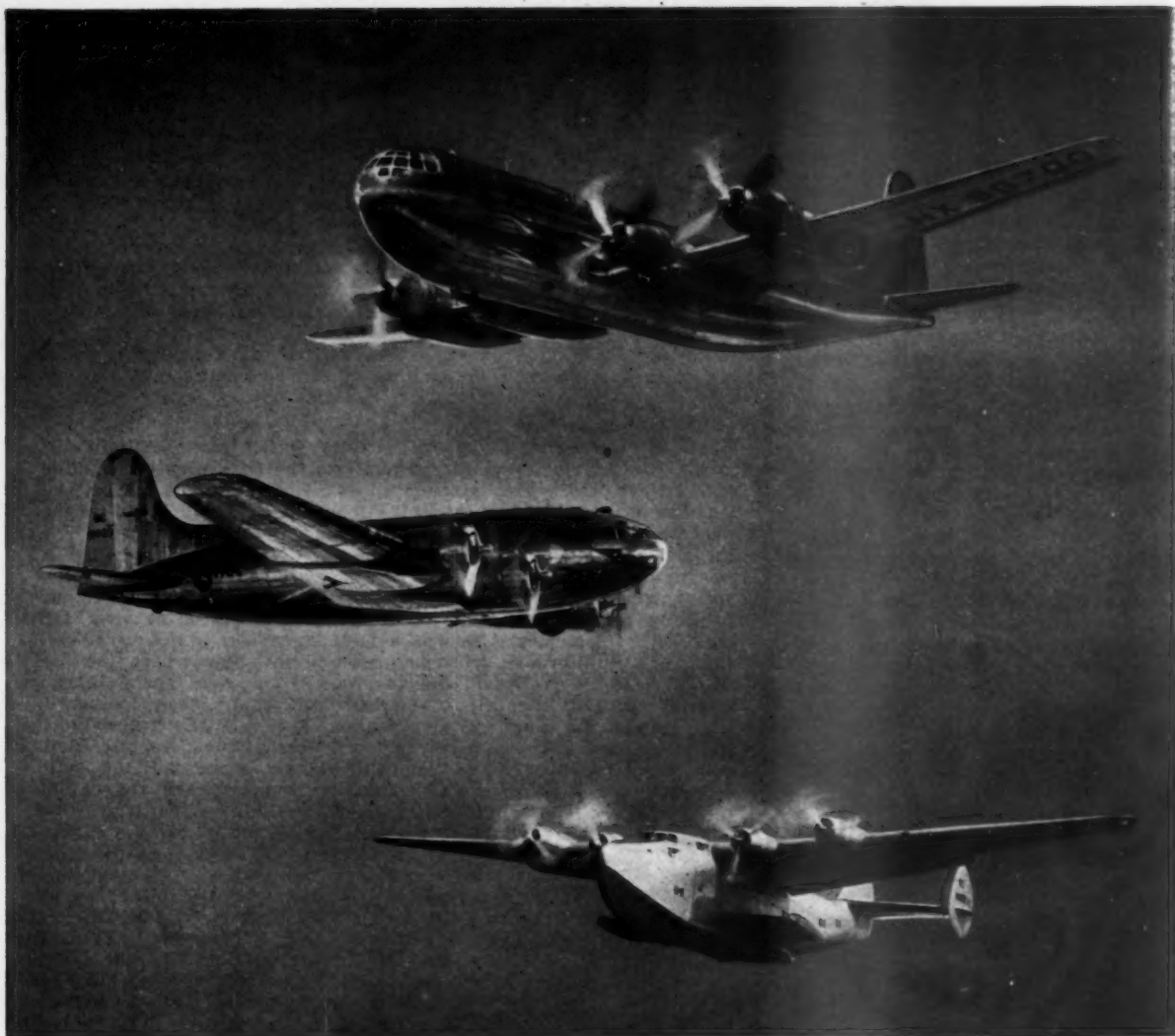
**I**N THE JULY 1 issue we presented an idea that an airline might do well to write a letter to mothers who had traveled on the line with children . . . Our suggestion was that the letter be signed by the hostess who had been on the trip . . . Our thought was that such a letter, expressing the hope that the mother had had a nice trip, etc., might spread the word about air travel . . . So Capital Airlines has decided to try it, and the first letters have already gone out . . . We'll be interested to see the results . . . Incidentally, Capital's Flight 901 had 16 children aboard on Aug. 8 . . . And United Air Lines says that a spot-check reveals that about one out of every 13 passengers is an infant or small child . . . There's business there . . .

**R. W. Chambers**, Northwest Airlines' station manager in Washington, was driving from the airport into the city recently, minding his own business, when he ended up in the middle of a situation . . . He noticed a mail sack lying in the road . . . Speeding ahead up the road went a government truck from which said sack had bounced . . . Pulling over, Rolly retrieved the sack . . . Then he noticed that it was a diplomatic pouch which had just arrived from Manila on—you guessed it—Northwest Airlines . . . This called for action, so Rolly tossed the pouch in his car, and zoomed off after the truck . . . On Memorial Bridge, a government car pulled up alongside and a uniformed gentleman wanted to know where the fire was . . . Rolly explained, the government car went ahead to run interference and, after a hair-raising ride around Lincoln Memorial, they caught the truck on Constitution Ave. . . . Congratulations, Rolly . . . You only missed by a few blocks giving the State Dept. door-to-door delivery, and you undoubtedly saved all the state secrets . . . You never can tell what will happen when you go out for a ride . . .

What individual has traveled most extensively as a helicopter passenger? . . . Seems that the writers of *United Airgram*, published by United Aircraft Export Corp., became curious after reading Wayne Parrish's articles on Los Angeles Airways and its Sikorsky S-51 helicopters . . . Their research showed that, as far as they could determine, H. Mansfield Horner, president of United Aircraft Corp., has "logged the greatest number of hours of anyone in the world as a helicopter passenger" . . . Mr. Horner has been using an S-51 as a business transport—for factory inspections, important interviews, conferences, etc. . . . He has logged 83 hours which, at 80 mph, allowing for hovering, landing and take-off, represents 6,550 miles . . . He has experienced one delay for mechanical reasons, and that was when the radio went out . . . A right good record, we would say . . .

The airline men who've been in the business a long time have built up some fine collections from the early days . . . We hear that **Warren Burke**, district traffic and sales manager for United at San Francisco, has a valuable collection of timetables and baggage stickers and that **Stan Halberg**, general traffic and sales manager for Continental, has a collection of business cards from airline men dating 'way back . . . We'd like to hear of other such collections.

Feeder airlines come in with some of the darnedest stories . . . If memory serves correctly, we had one some time ago about the employee at a small feeder stop who had to take quite a bit of time off to take care of his grandmother's rabbits . . . Now comes Wisconsin Central Airlines with the story about **Don Lothrop**, station manager at Land O' Lakes, Wis., who sent a frantic message to Madison headquarters for one pair of uniform pants . . . "Mine stolen out of car along with all my other pants," said the teletype . . . It develops that Lothrop has his hands full . . . Sometimes he has to tell the pilot to circle the field while he gets a herd of deer off the runway . . . He also has to put up with a bear family which watches the landings and takeoffs . . . In the process of moving, he left all his clothes in his car overnight at the field . . . Next morning most of them were gone and shreds of uniform pants were found on the knoll which is the bear family's hangout . . . The feederline business is hazardous . . .



## *Can you name all three?*

They're Boeings—built by the pioneer in manufacture of four-engine military and commercial aircraft . . . members of the same family as the B-17 Flying Fortress and B-29 Superfortress.

At bottom, you see the Boeing 314 transocean Clipper. Just above it flies the Boeing Stratoliner. And at top is the newest of the three, the twin-deck Boeing Stratocruiser.

Carriers of presidents and prime ministers, Pan American's stout-hearted

314 Clippers and their sister ships flying British Overseas Airways colors transported 153,500 passengers, 10,709,000 pounds of mail and 10,241,000 pounds of cargo over 20,355,000 miles of flight routes to Europe and Asia. And now under new ownership they're still flying!

The Stratoliners, built by Boeing in 1939 and "drafted" in 1942, virtually blazed trail for the Army's Air Transport Command. They made 3000

wartime ocean crossings and flew 7,500,000 miles without mishap. They were the first transports with pressurized cabins.

Now comes the great Boeing Stratocruiser. This twin-deck luxury liner combines the ruggedness, dependability and stamina of her predecessors with matchless speed, comfort and spaciousness. Stratocruisers have been ordered by six of the world's leading airlines as queens of their air fleets.

**Boeing is building fleets of Stratocruisers for these forward looking airlines:**

**PAN AMERICAN WORLD AIRWAYS • SCANDINAVIAN AIRLINES SYSTEM • NORTHWEST AIRLINES**

**AMERICAN OVERSEAS AIRLINES • UNITED AIR LINES • BRITISH OVERSEAS AIRWAYS CORPORATION**

**For the Air Force, the B-50 Superfortress, XB-47 Stratojet and C-97 Stratofreighter; for the Army, the L-16 Scout Liaison plane.**

# **BOEING**

**AMERICAN AVIATION**



# CAA, Airlines Seek Improved Oxygen Mask Equipment

By WILLIAM D. PERREAULT

First official recognition of the inadequacy of the continuous flow, rebreather type of oxygen mask currently in use on most transport type aircraft came recently from CAA with circulation of Aviation Safety Release 295 titled "Protection against Smoke and Noxious Gases Aboard Aircraft." In the release CAA pointed out that the rebreather mask provides fractional amounts of oxygen and ambient air. The amount of each varies with altitude, with the proportions at 15,000 feet established as 22% oxygen and 77% surrounding air.

Considering the importance placed on the use of the oxygen mask during the discharge of CO<sub>2</sub> for fire fighting purposes this type of operations means that 77% of the air taken in by the user of the continuous flow type of mask is apt to be contaminated air which he is trying to avoid. In tests conducted by TWA using a Constellation aircraft to determine the concentrations of CO<sub>2</sub> which are apt to exist in the cockpit during discharge of fire extinguishing agent into the forward lower cargo compartments, two crew members lost consciousness. They were not equipped with masks but others taking part in the tests and using rebreather type masks were seriously affected also.

Their reactions included the first seven of eighteen known affects which range from increase in the rate of breathing, muscular weakness and incoordination, lack of judgment, eye burning, convulsions and collapse. In this instance the most serious reaction of those wearing the present day mask was muscular weakness but it is evident that this could be most serious.

A report of the Lovelace Clinic states that a normally healthy heart is subject to rapid failure when the respiratory system is subject to high CO<sub>2</sub> concentrations. The report further indicates that maximal CO<sub>2</sub> concentrations for areas occupied by personnel are as follows: 5% by volume for 5 minutes, 4% by volume for 15 minutes and 1% for two hours. These figures are for sea level applications. Those at altitude are so critical: 4% CO<sub>2</sub> concentration at sea level has the same affect as 7.5% at 15,000 feet.

**Full Mask.** CAA recommends that a full face mask supplying 100% oxygen be used by the crew members to prevent the dangerous possibilities existing with rebreather masks. Although some masks are available which will supply 100% oxygen but which do not protect the eyes, the CAA does not favor use of these masks even though used in combination with goggles. When goggles are used and the air has already been



**Demand Mask**—This Mines oxygen mask and portable walk around bottle is now under service test by Capital Airlines. It features 100% oxygen and is equipped with goggles to protect the eyes.

contaminated they tend to trap the contaminants under the goggles with continued irritation, tearing and impairment of vision resulting. Goggles also tend to fog which is most undesirable.

When a full face mask is used even after the air has become contaminated the high oxygen concentration neutralizes the effect of the contaminant and some masks such as the one shown in the cut incorporate provisions for minimizing the fogging possibilities. One objection to the full face mask is the difficulty experienced in talking with other crew members once the mask is in use. In the mask shown, one plug may be removed from the face of the mask and a small microphone used as a replacement to facilitate cockpit and/or air to ground communications.

The subcommittee appointed by CAA and CAB to reconsider the proposed change in CAR dealing with oxygen systems is confronted with incorporating data only recently made available by the TWA incident at Chillicothe, Mo., the industry conclusion regarding the DC-6 accident at Mt. Carmel, and tests conducted since that time. Originally the committee was assigned to iron out industry opposition to the proposed changes in oxygen requirements of Part 04 which have been obsoleted by industry developments such as cabin pres-

surization. This ruling has been pending almost a year now.

In addition to the tests which have indicated that CO<sub>2</sub> released in the lower cargo compartment of the DC-6 can enter the cockpit under certain flight conditions, additional experiments by United Air Lines and Pan American Airways have proved that the concentration of CO<sub>2</sub> in the cockpit of a DC-4 ranges from 20% twenty seconds after discharge of two 15-pound charges in the forward cargo compartment to 0% two minutes and 30 seconds later. TWA's tests on the Constellation show cockpit concentrations of 8.5% eleven minutes after the discharge of three banks of bottles with a gradual drop off to 5½% after 28 minutes.

Forced ventilation of the cockpit by opening of certain windows in each type airplane can clear out such concentrations almost immediately but the danger of fanning a fire is ever present and tends to minimize use of this recourse.

**Keep Ax Handy.** In the July issue of *The Air Line Pilot*, H. B. Cox, American Airlines pilot and a member of the President's Special Board of Inquiry for Air Safety recommended to fellow pilots that until such time as adequate masks are provided it is advisable to have a fire ax handy to punch a hole in the forward windshield as a last resort.

Cox also sheds light upon another point which has been asked a number of times since the DC-6 accident at Mt. Carmel. That is the matter of why the possibility of CO<sub>2</sub> entering the cockpit of the DC-6 had not been considered during the DC-6 modification program. Regarding this Cox states, "May I protect the integrity of the DC-6 committee and myself by stating that we did demand a correction and as a last resort arranged for the representatives of the manufacturer of an adequate smoke and oxygen mask to give demonstrations. No one seemed interested. Therefore, I appeal to you as individuals to write to the CAB Safety Bureau and demand correction of this inadequacy on all certificated planes."

The airlines are taking steps to install masks that will supply 100% oxygen to the crew members. CAA recommends a type A-14 demand mask (or equivalent) used with a regulator such as the AN 6022. American Airlines is contemplating the use of masks and regulators meeting AN specs of this general category, and Capital Air Lines is in the process of service testing an installation using the Mines Safety Appliance demand mask and regulator.

All segments of the aviation industry from the research laboratories through the individual airline's engineering offices are putting maximum effort behind the design and development of improved oxygen apparatus. Outstanding developments such as the chemical oxygen generators now under consideration will advance the science of altitude flight biology while striving to correct existing deficiencies.

# Flight Engineers Called 'Very Necessary'

(Editor's Note: On Aug. 1 AMERICAN AVIATION reported in some detail the protests filed by several airlines and the Air Transport Association against CAB's proposal to require flight engineers on all 4-engine aircraft grossing more than 80,000 pounds. The story dealt with latest developments (generated by opposition forces) and made no attempt to re-state the arguments presented by proponents of the regulation at last October's CAB hearings.)

Letters from flight engineers and others favoring the regulation have urged that their contentions again be placed on record for comparison with the arguments of the opposition group. AMERICAN AVIATION is glad to reproduce below, without comment, excerpts from a letter sent in by one of the flight engineers. Mr. Townshend's views are his own and do not represent an official stand by the Flight Engineer Officers Association.)

By DONALD H. TOWNSHEND

Editor, Flight Engineer Officers Association News, PAD Division

The Aug. 1, 1948 issue of AMERICAN AVIATION contains a featured article by Mr. David Shawe, entitled "The Flight Engineer—Help or Hindrance?" As a veteran reader and subscriber to AMERICAN AVIATION and member of the Flight Engineer Officers Association, I wish to bring certain facts to your attention regarding this article.

In his article Mr. Shawe quotes American Airlines numerous times to show that nowhere has anyone defined, in the regulation, what the duties of the flight engineer are or should be. If American Airlines is really at a loss on this subject, they can become enlightened very quickly by referring to the operating section of the route manual of Pan American or to American Overseas Airlines and Trans World Airline (TWA). It hardly seems like a reasonable protest.

It is to the airlines advantage to use their own discretion and experience in assigning duties to each of the members of the crew.

**Required in DC-6.** In addition, the whole article has intentionally been narrowed down to the DC-6 as if to infer that it is the only commercial air transport flying today. Paradoxically, the DC-6 is the one aircraft that desperately needs a flight engineer.

Pan American World Airways is the largest airline in the world and undoubtedly the most experienced when it comes to discussing flight engineers, and their opinion should carry weight in the discussion. Does Mr. Shawe quote PAA? No, he picks the most unimportant, small airline (As far as the subject of flight engineers is concerned) he can find—Delta.

Mr. Shawe quotes from an American Airlines petition against the regulation which shows that flight engineers have contributed to a number of civil and military accidents. For proof



**Simplicity Needed—**Acknowledging that simplicity in cockpit design is desirable and championing its development, Townshend claims that present day cockpits of airplanes such as the Boeing 377 (shown above) demand a flight engineer's technical assistance.

they cite the fact that 22 B-29 crashes were officially charged against flight engineers. The fact that 75% of all aircraft accidents are attributed to pilot error does not prove that pilots are unnecessary.

In addition, Mr. Shawe quotes a letter from the ATA which says, "It is our opinion that the crew complement with which aircraft should be certificated is dependent upon (1) the number and type of functions which it takes to operate the airplane safely; (2) how many qualified persons are needed to carry out these functions safely." If the ATA is sincere in that statement, they no doubt are in favor of flight engineers on the DC-6. I make that statement because ATA has all of the following information.

**PAA Survey.** A recent comprehensive survey by Pan American World Airways (which has led all the airlines of the world in the scientific medical study of the development of flight crews and their human capabilities) Pacific-Alaska Division found that, in comparison with the DC-3 (the time-tested twin-engine transport which through years of experience has proved to be the maximum that two pilots can efficiently handle), the Lockheed Constellation has 131% more instrumentation.

The Connie is, however, equipped with a flight engineer's station and these figures included the instrumentation at the engineer's station. Omitting his instruments and controls from the comparison, the Connie has only 14% more for the pilots to handle than the DC-3, and this is in aircraft of four times the weight, twice the speed and passenger-carrying capacity.

On the other hand, the DC-6, which is as big as the Connie in all respects, has no flight engineer station and demands 110% more from the two pilots than the DC-3. If two pilots had their hands and heads full in the DC-3, it is hard to understand how they can be expected to operate at peak efficiency in an airplane with 110% more for them to pull, push, watch, twist or crank.

The total number of controls, switches, gauges, warning devices, and rheostats in the DC-3 number 208. In the Connie there are 238 in the cockpit and 244 at the flight engineer's station. In the DC-6 there are 436, all in the cockpit.

**Sincerity Questioned.** It is stated that the protesting airlines do not consider the added cost of the additional crew member an important factor. They do say that if they could be sure that a flight engineer might avert just one accident, they would be entirely in favor of carrying them.

If this is true, we can furnish records proving such to have been the case in the past. The only solution is to accept the regulation as it stands and thus prove the flight engineers worth.

The pressure that has been brought to bear on the CAB and the government by the ATA and the management of some airlines has not been sincere thus far. If these "opposition groups" wish to arbitrate the case on its merits, we will put all of our pertinent records at their disposal in order for them to prove that there is only one answer—flight engineers are very necessary and are here to stay.

## CAA & GCA Liability

Possibility that the government would be held liable for death, injuries, or damage caused by negligence of CAA personnel operating GCA equipment was mentioned as one of several factors influencing the CAA's choice of ILS as the primary landing aid. In a talk before the Corporation Aircraft Owners Association, F. B. Lee, deputy administrator of CAA, stated that this possible liability combined with the high cost of installation and maintenance of GCA equipment would not prevent its use as a monitoring device and installations are going ahead at major airports.

Tentative schedule of new installations is as follows: Los Angeles, Oct. 15; Cleveland, Feb. 15; Atlanta, April 15; St. Louis, May 15; and Boston, June 15. In addition to these new installations, equipment presently installed at Washington, New York and Chicago will be replaced with newer units. Some delay in the present timetable may occur due to material shortages which are hampering the manufacturer's production timetable.

CAA is now training personnel to man the new stations as they are completed.

## Flight Aid for Southwest

Installation of a radio beacon by Southwest and Mendocino County at Fort Bragg, Calif., will enable Southwest Airways to approach the 100% mark for completion of landings and take-offs at its Eureka-Arcata stop during the coming heavy fog season. The new beacon will give Southwest instrument navigational facilities over the route from San Francisco to Medford, Ore. The operation will be simplified by use of the special landing aids devices at Arcata allowing routine operation into the heaviest fog belt in the country.

## ILS For Pioneer

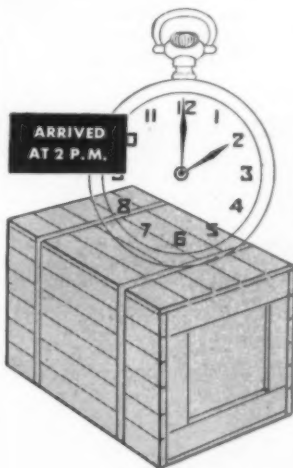
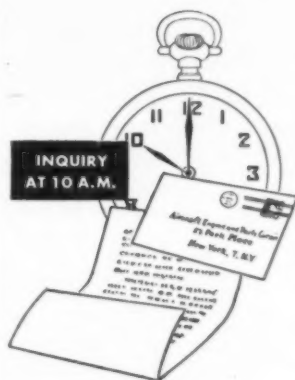
Pioneer Air Lines has completed the installation of ILS equipment in its nine DC-3's at a cost of over \$14,000. Ground installations are complete at Houston, Austin, Dallas, Fort Worth, Amarillo, Albuquerque and El Paso along Pioneer's routes and CAA indicates that the Midland-Odessa station will be ready late this summer.

With landing minimums lowered to 300 feet and 3/4 mile visibility, Pioneer hopes to complete 97% of its flights as compared to 80-85% completed during the winter season last year.

**GCA at London:** During the first year of GCA operations at London Airport ending July 1, some 2,184 radar controlled landings were completed. Approximately half of these were operational landings and the balance for training.

from inquiry to delivery

# .... Four Hours



At ten o'clock one morning an airline inquired into the availability of certain vitally needed aircraft engine parts. By two o'clock that afternoon the shipment reached its destination . . . 200 miles away. • Nothing . . . absolutely nothing . . . was sacrificed for the sake of speed. Every part was meticulously inspected . . . guaranteed new and in perfect condition . . . properly preserved and packaged . . . accurately labeled according to customer specification. • The secret to this and many other examples of speedy service lies in **AE&P's** smoothly functioning organization and **AE&P's** vast inventory of **WRIGHT** and **PRATT & WHITNEY** engine parts and special tools. • If you have not yet tried **AE&P's** service, then why not test it with your next order?

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Authorized Agent War Assets Administration

## AIRCRAFT ENGINE AND PARTS CORPORATION



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## Little Activity at Idlewild

As it now stands there is very little maintenance activity going on at New York International Airport. Two well organized maintenance activities have taken space in Hangar 1 and are setting up shops which will rival those of the scheduled air lines when they are completed.

These are the facilities of Willis Air Service and Sailor's Aircraft Service. Sharing the 60,000 square feet of space under the roof of Hangar 1 and splitting the \$8,000 per month rental fee, these operators will specialize in transport maintenance and overhaul. Willis is expected to handle the bulk of Douglas equipment while Sailors takes care of Lockheed equipment.

The arrangement of the hangar with large doors at both ends makes it a simple matter to house the two operations without the difficulties which so often accompany shared hangar arrangements. There is ample space for six four-engine aircraft in the hangar.

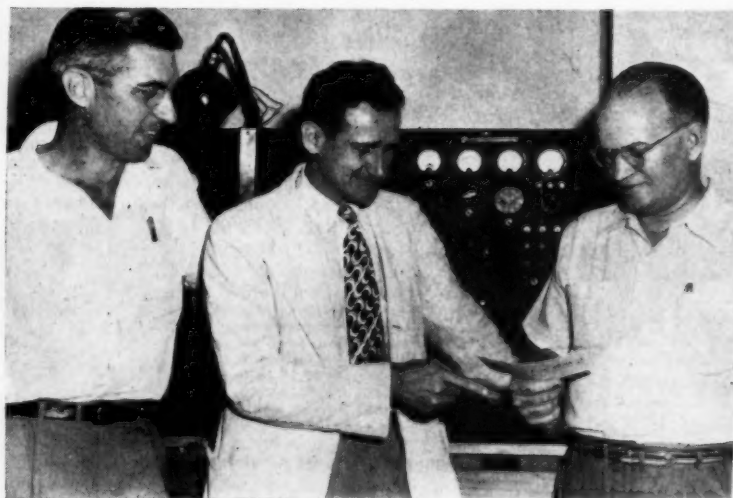
Another feature of maintenance service by both Willis and Sailors is the provision for on the spot communications equipment servicing and overhaul. This work is subcontracted by both companies to Mars Aircraft Radio Service, an up to date organization that has the specialized equipment and trained personnel to handle the latest types of communications equipment. This phase of aircraft servicing, for other than scheduled airlines having their own shops, has been sadly lacking in the past at most airports.

Hangar 2 is occupied by four of the foreign operators: Air France, Scandinavian Airlines System, Sabena, and KLM, the Royal Dutch Airline. These airlines are using the hangars for general ground servicing purposes such as commissary activities, food servicing, etc., rather than for actual maintenance activities. This is in part due to the contracts existing between some of the foreign operators and Lockheed Aircraft Service and Grumman's maintenance affiliate. As these contracts expire it is likely that Hangar 2 will meet with wider usage. Present schedules enable each of the operators to benefit from the shared hangar because as a rule the entire hangar is available for use.

Other than the high hangar rental rate which will affect earnings of the independent maintenance organizations, the chief problem at Idlewild is its spaciousness.

Round trip from hangars to terminal and back is just 15 miles over crowded highways that carry New York's traffic to the beaches and parks that cover Long Island. Appeals have been made to the Port Authority to provide policed crossings of one of the runways at least on days when that runway is not in use as this would cut the distance to about one mile round trip. As it now stands last minute needs which must be filled at the hangar present a difficult situation.

The reluctance of the scheduled carriers of the U. S. to move to Idlewild has given the independent maintenance organizations one of their first opportunities to move in with men and equipment at a point where maintenance activities should show rapid growth.



**Invention Pays Off—** \$500 is the award being presented to Dwight M. Barnes, veteran Pan American Airways radio mechanic, by Rahland C. Zinn, Latin American Division engineer. Award was given Barnes for his winning employee suggestion for a new propeller synchronizer testing apparatus. Shown left to right are: L. E. Michelfelder, supervisor of radio maintenance for PAA in Miami; Zinn and Barnes.

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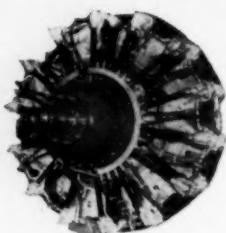




*The Air Force F-80 Lockheed Shooting Star.*

SEPTEMBER 1, 1948

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## OPERATIONS-MAINTENANCE

### Engine Trouble Finder

Pan American Airways has ordered 20 Sperry Engine Analyzers for installation on the 20 Boeing Stratocruisers now in production and an additional 18 units for the Constellation fleet. Estimates are that the installed instruments will cost about \$3,600 per airplane and will bring about a saving of \$3,700 per year per airplane along with noticeable improvement in "on-time" operation.

A large percentage of avoidable delays are the result of ignition difficulties because of their often intangible nature. Routine practice in most airlines has been to replace spark plugs, leads and magnetoes in a point by point isolation check. With the analyzer PAA expects to be able to spot the source of the trouble in flight and prevent loss of time and effort in locating the source. This will in turn minimize cost of overhauling units removed prematurely in quest of trouble which is finally located elsewhere.

Reviewing past records PAA discovered 10,000 hours in delays experienced on their L-49 fleet during 1947. Engineering personnel felt that 2,900 hours of this lost time could have been prevented by proper use of the analyzer. Service test of one unit actually recorded a 17% improvement in hours lost through delays and interrupted flights. As the crews become more familiar with the instrument's operation and learn to rely more fully on it, increased savings are expected.

**How It Works.** In operation a screen or scope in the cockpit provides a graphic display of the engine ignition system. Minute signals picked up from connections into the ignition leads of the engine's magnetoes are amplified and presented in the display in one of a comparatively few designs. There are 10 basic ignition patterns for the engines used on the Constellation including: normal ignition, shorted secondary, fouled spark plug, plug gap too large or too small, open secondary, etc.

With a little practice the operator, pilot or mechanic, can learn to distinguish between these designs and translate them into specific troubles. Pan Am has trained 12 ground personnel in the analyzer's operation and is planning training of additional technicians.

As installed in the Pan Am airplanes the analyzer will be used for ignition analyzing only but it is possible to use pickups to determine detonation and other engine malfunctioning resulting in vibration signals. Experimentation is going on to determine whether the scope presents data which can be translated into fuel air mixture indications and enable more accurate fuel control and consequently present fuel savings and longer ranges.

Pan American's engine test house at Miami will also be equipped with an ignition analyzer to gain additional service information and aid in general testing.

## CERTIFICATION

### P&W R-2180 Certificated

The 1650 hp version of Pratt and Whitney's 2180 engine has received CAA certification with expectation that additional qualification tests will permit its certification at 1800 hp. The R-2180 is under consideration by the airlines as a replacement of the R-2000 engine now used on the DC-4 airplane. If used, it would result in a speed increase of 30 mph and boosting of the take off weight limitation to 80,600 pounds.

First commercial use of the R-2180 will be in the Saab 90 Scandia, a Swedish transport in the 250 mph class.

### Progress on Boeing 377

Possibilities are that the Boeing 377 will complete extended CAA service tests which are now underway in about four weeks and that first deliveries to Pan American Airways will follow in October if no further interruptions to present schedules occur.

One of the three planes used during the certification flight tests at Wichita is being used for the 200 hour service tests. This plane, which is equipped with Curtiss Electric propellers, is one scheduled for delivery to Pan American. Operators using Hamilton Standard propellers will require additional testing supplementing the present group.

Originally deliveries were scheduled in the following order: Pan American, Northwest, and American Overseas Airlines. Because Northwest's airplanes are being modified to incorporate a flight engineer panel and will also be equipped with Hamilton Standard propellers it is likely that American Overseas may receive their first airplane ahead of Northwest.

### 3-Engine Ferry Flights

Tentative approval has been granted to Delta Air Lines to operate C-54-DC-4 aircraft on ferry flights with one engine inoperative. The approval has granted covered airplanes equipped with Pratt and Whitney R-2000-9 and R-2000-13 engines. The CAA has since worked out the computations necessary to extend this approval to C-54 airplanes equipped with R-2000-7, -11 and Wright C9HD engines.

Maximum take off weight for three engine ferry flights is limited to 51,000 pounds and the crew limited to those essential to the purpose of the flight. This is interpreted to mean the captain, first officer and when necessary, a mechanic. No passengers or cargo may be carried. The propeller of the inoperative engine may be feathered or removed from the engine.

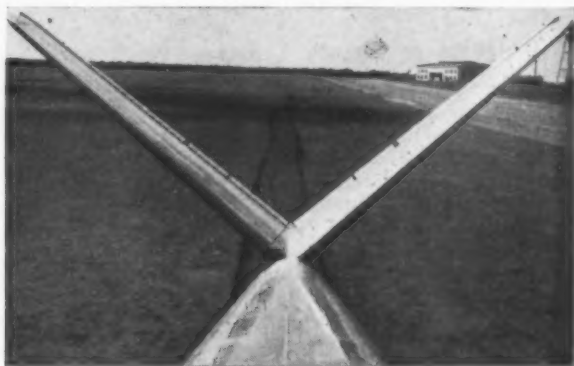
**More KLM Connies:** The third repeat order from KLM Royal Dutch Airlines for Constellations increased from 17 to 19 the total purchased by the airline.

AMERICAN AVIATION





**EMERGENCY LANDING** seems a misnomer for the gear up landing made by Beech's Twin Quad recently when the hydraulic gear failed to operate during a routine test flight.



**EFFECTIVENESS** of the Twin Quad's V tail assembly is emphasized by the skid markings which show how the pilot was able to maneuver the airplane after it had skidded over 100 feet along the ground.

## Twin-Quad Unscathed in Belly Landing

The time worn phrase that "everyone complains about the weather but nobody does anything about it" has its parallel in the aviation industry with the eternal comment that airplanes should be built to withstand emergency-gear-up landings. Although engineers have long felt that the weight cost of such a feature would render it impractical, Beech Aircraft Corp. has succeeded in accomplishing this end without the predicted weight penalty.

Recently while on a routine test flight the factory test pilots found that, due to the hydraulic system failure, the gear could not be lowered. Reflecting on the built-in keels which were to be the subject of future tests, the pilots decided to make an emergency landing with gear retracted. While the airplane's crew made arrangements with the tower to land the Twin-Quad on the grass alongside the runway, ground

crews took the necessary precautions to accompany the "crash landing."

Purposely picking a spot of soft, wet ground, the crew made the final approach and landing. The airplane skidded along for 615 feet on the keels in much the same manner as a seaplane making a routine landing. Striking a soft spot, the airplane swerved from its course but even at this late moment sufficient rudder control remained to maneuver the airplane. As shown in the photographs, the crew was able to straighten the airplane on its course. This is indicated by the keel marks in the soft ground.

As the airplane came to rest the crew stepped out of the unharmed airplane to look back on an historic landing. Except for slight deformation of the keel fairing no damage was done to the airplane. Even minor buckling of the fuselage skin and stringers, which might

have been anticipated, did not occur.

**Shovel & Bottle.** Another surprise was due for the interested onlookers, for the only equipment used in setting the airplane on its gear again was a shovel and an air bottle. The gear was lowered to the ground, the oleo struts deflated and a slight depression made in the ground to permit the gear to attain its vertical position and lock. Then the airbottle was used to extend the oleo about 10 inches, the engines were started and the airplane moved out of the trenches on its own power—ready for operation.

The flags shown along the runway serve as a warning to pilots that the ground in this area is too soft for taxiing. It would not support the weight of an ordinary automobile yet the depressions made by the Beech landing were not enough to permit the fuselage to strike the ground.



**LOOKING FORWARD** along the bottom of the fuselage after the Twin Quad had been raised off the ground, the only indication of the emergency landing is the mud on the built-in keels.



**THIS CLOSE-UP VIEW** of the Twin Quad emphasizes the unmarred fuselage following a gear-up landing. Note the air inlets in the wing for the twin engine installation which drives each propeller.

SAFETY

# Thunderstorm Safety Chart

Findings concerning the effects of turbulence, icing, gusts, hail and lightning in thunderstorms made at the All Weather Flying Center in Wilmington, Ohio have been incorporated in a "Thunderstorm Safe-Speed Chart" now in use by the U. S. Air Force. This project was authorized by Congress in 1945 as a joint endeavor of the Air Force, Navy, U. S. Weather Bureau, and the National Advisory Committee for Aeronautics.

Prepared under the direction of Captain Lou C. Kappil, chief of the "Thunderstorm Project," these charts provide a color coded speed reference for cargo and transport aircraft while flying in thunderstorms. Safe operating ranges are outlined in green with red markers above and below this range indicating unsafe conditions. Yellow areas indicate marginal conditions.

Six Air Force's Northrop P-61 Black Widows, were used to make 2,000 flights into thunderstorms over a two-year period to obtain detailed information of conditions which aircraft encounter in flights through thunderstorms. Radar scopes at the ground stations were used to determine the location and center of the storms. One Black Widow was fully outfitted with radar equipment to implement station findings.

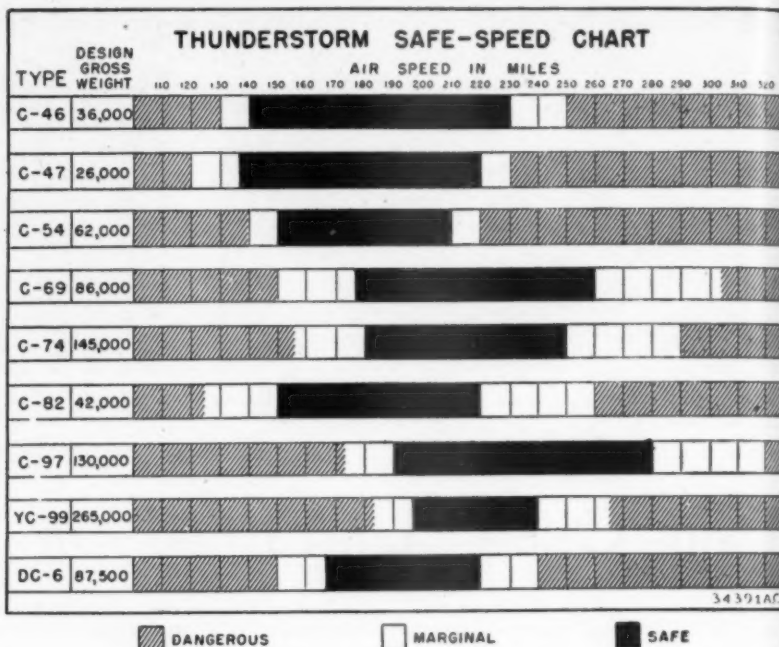


Chart designed by the Air Force's All-Weather Flying Center indicates safe operating speed of transports flying during thunderstorms.

A complete picture of the storm conditions was assured by storm entries at altitudes of 6,000—10,000—15,000—20,000 and 25,000 feet. Special instruments

recorded the icing characteristics, gust velocities and frequency, electrical content of the atmosphere and stress on the aircraft structure.

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Beechcraft: 18s, AT-11s, AT-7s  
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Fairchild: PT-26s (New)  
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Wright: 2600-29-23-22-13, R1820-87-66-60-56-52

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Newark, New Jersey

## CAB Accident Report

**Airline Transport Carriers:** Failure of the left wing caused by a fire in the engine and nacelle area was cited by CAB as probable cause of the accident of an Airline Transport Carriers DC-3 at Coalinga, Calif. on Jan. 28, 1948. Post accident investigation revealed that the left engine fuel pump was loosely assembled and that a faulty gasket permitted fuel to spray from the pump housing during operation. Examination of the wreckage indicated that fuel from the pump was ignited and burned away the front spar resulting in wing failure.

Although not directly related to the accident, the investigation revealed major discrepancies in the aircraft operation during the flight.

Airline Transport Carriers, a non-scheduled carrier, operates two types of DC-3s. One type is certificated for 26 passengers, the other for 32. The crew departed in a 26 passenger airplane thinking it was the craft of greater capacity. As a result the craft was not airworthy since it was 7 hours overdue for a 100 hour inspection at time of departure from Burbank. At Oakland 28 passengers were boarded but seats were not available for that number so two passengers were without seats or safety belts. A customs official who assisted in the loading indicated that there were several pieces of loose cargo in the aisle at time of take off, the CAB report states, and records indicate the aircraft total weight was 67 pounds over the certificated figure.

CAB indicated that these discrepancies did not influence the accident.

## Emergency Exit Markings

Improved markings for emergency exits have been recommended in aviation safety release 293 as a result of findings of the President's Special Board of Inquiry on Air Safety. This release rescinds SRR 273 which met with considerable industry opposition.

The new release calls for improvements in marking of all aircraft having a total capacity of six or more persons and certificated for passenger carrying at night. Provisions include locating exit signs and markings in more prominent positions, use of luminous letters on an opaque background in preference to luminous backgrounds, and a requirement that printed instructions be readable in complete darkness at a distance of 30 inches.

Alternate provisions enable the use of inertia operated lights independent of the aircraft's system which will illuminate the exits and markings and which will function automatically in the event of a crash landing.

The recommendations provide specific sizes for all lettering and describe general luminous qualities desirable in such markings. Aircraft operated in daytime flights are not affected by the ruling.

## SAFETY SLANTS

**CARBON** tetrachloride is widely used in aircraft maintenance because it is a non-flammable solvent quite versatile in its utility. It is this apparent versatility, however, which can cause trouble. Very few mechanics seem to be aware that carbon tetrachloride-clear, such as is specified for cleaning, is a very different product from carbon tetrachloride fire extinguisher fluid.

The latter, even when clear, contains certain added chemicals which are necessary to make it suitable for use in fire extinguishers, but which make it totally unsuited for use as a cleaner. For example, chloroform or other material may be added to lower the freezing point and certain inhibitors, which reduce the possibility of corrosion of the extinguisher metal. These materials have an adverse effect on the cleaning qualities and conversely cleaning carbon tetrachloride is unsatisfactory for filling fire extinguishers.

Carbon tetrachloride should be used with care for it is quite volatile and, if inhaled in sufficient quantities, may produce headache, dizziness, nausea, and eventually unconsciousness and death. There are a number of well authenticated cases of fatalities resulting from the use of carbon tetrachloride for cleaning.

Skin irritations are not uncommon for the product has a solvent action upon the natural skin oil and leaves it dry and subject to cracking.

These rules will help prevent trouble:

1. Use only with adequate ventilation, never in a small closed room.
2. Avoid using in open vessels.
3. Remove leaking containers outdoors and clean up spills with rags. Get the rags outdoors at once.
4. Remove wet clothing promptly.
5. If you note any unusual symptoms, stop work at once and seek relief.

The National Safety Council reports in its annual "Accident Facts" that the average lost time frequency rate of all airlines reporting to it for the year 1947 was 16.30. This means that there were 16.3 injuries involving loss of time after the day of the accident for every million man hours worked. The average rate for all firms and all industries was 13.26. The rate of reporting aircraft manufacturers was 7.14.

The Safety Council also reports that the scheduled domestic passenger fatality rate of 3.2 per hundred million passenger miles was only one-ninth of the 1930 rate of 28.6. In international operations the rate was 1.1. Three airlines (American, Northwest, and Pan American) received special awards for operating over a billion passenger miles without fatality to passenger or crew.

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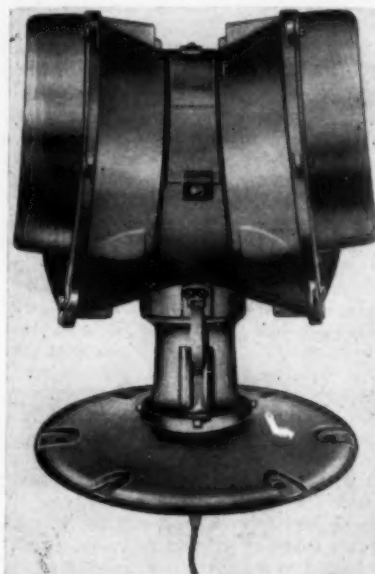
Carling Dinkler,  
President

## OPERATIONS-MAINTENANCE

### NEW EQUIPMENT

#### High-Intensity Lights

Westinghouse Electric Corp. has announced a new high intensity runway light designed to meet CAA specification L-819 and AAF specification 32957.



Interchangeable with old style high intensity lights or as replacements for semiflush contact lights, the new units provide two main beams formed by duplicate double-lens assemblies from a single lamp. Color is provided by an inner lens so that there are no hot colored lenses exposed to the elements. The new assembly uses a 200 watt, 6.6 ampere aviation lamp with medium prefocus base. Simple design of the housing and mounting units insure minimum maintenance. Further information available from Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.

#### Soldering Iron Tip

A chromium plated, copper electrode soldering tip for electric soldering irons has been placed on the market by Cal-Perry Corp. The new tip, which will heat in 9 seconds, has a long narrow neck providing optimum accessibility



and minimum heat loss is assured by chromium plating of all but the working surface. The purchase price of 65c includes a six-month guarantee. Additional information available from Cal-Perry Corporation, 62 Franklin Street, East Orange, N. J.

#### Fuel Cell Stripper

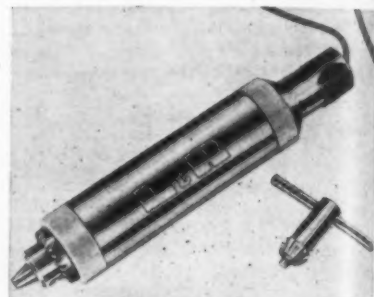
Kelite Products, Inc., is marketing a new product for removal of thiocals or zinc chromate compounds used in integral fuel tank systems. Known as Kelite Deseal E, the new cleaner is of semi-liquid consistency and will hold in place on vertical surfaces and may be applied by brush or spray. A low pressure water rinse is used to remove the old sealant. Complete data will be sent by Kelite Products, Inc., Box 2917, Terminal Annex, Los Angeles 54, Calif.

#### Battery Charger

The Electric Products Co., 1725 Clarkstone Road, Cleveland 12, Ohio, is manufacturing new battery charging equipment designed to provide automatic handling of many phases of battery charging. The new E. P. charger starts the charging current at the proper value, controls the current to the batteries throughout the charge, shuts down and disconnects the batteries from the generator in case of a power interruption, restarts and resumes charging when power is restored, protects against reversal of current or overload, cuts off the battery when fully charged and stops the generator when all batteries are charged.

#### Radial Handpiece

An aluminum housed, radial handpiece with Jacobs chuck for flexible shaft machines has been introduced by L & R Manufacturing Co. Consisting of



a two piece aluminum body with two presealed ball bearings and a Jacobs O to 5/32 range chuck, the handpiece measures 5 1/4" long by 1-1/16" in diameter and sells for \$17. Details regarding the radial handpiece and other members of the L & R line may be obtained from L & R Manufacturing Company, 577 Elm St., Arlington, N. J.

#### Solenoid Contactors

Ward Leonard Electric Co. has released bulletins 4452 and 4453 describing their new size 2 and 3 AC solenoid contactors. The new contactors are designed for use on AC motor controllers, for machine tools, fans, pumps, heating and ventilating systems and similar applications. Bulletins available on request from Ward Leonard Electric Co., 31 South Street, Mount Vernon, New York.

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# And It Can't Be Sued

Seeking improved relationship with the Port of New York Authority, 10 airlines serving the New York area last week appealed to Mayor William O'Dwyer to help rid them of arbitrary actions and "deliberate harassments" which they said were detrimental not only to the airlines but to the City of New York as well.

Pointing out that the actions of the Port Authority were driving the airlines to move maintenance and overhaul activities employing thousands of people away from New York to other locations, the letter to O'Dwyer said:

"Unless something is done to bring about a material change in the attitude of the Port Authority, both LaGuardia and Idlewild will become airport stations of reduced employment, compared with the importance of the area and the potential employment which could and should exist here."

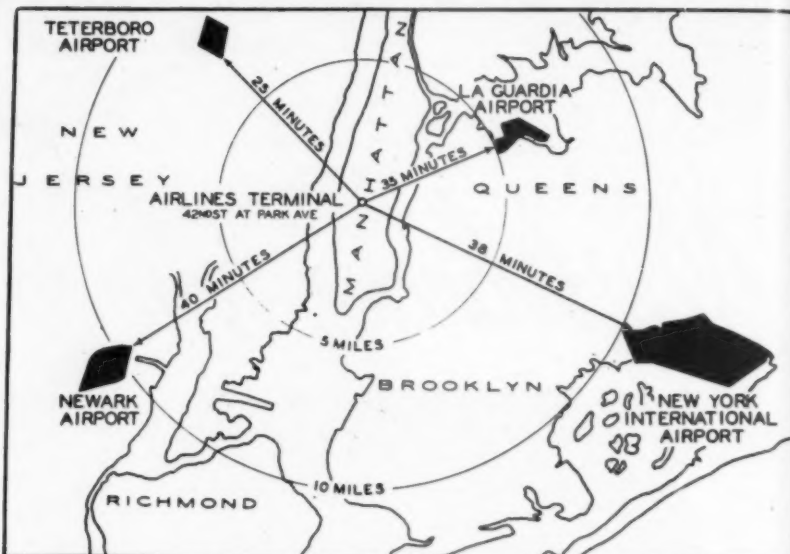
After taking over the airports from the city and after having declared its intent to recognize the validity of the leases which it assumed from the City, the Port Authority "took action which the airlines consider to be repudiation of the leases," stated the communication. And to add to the difficulties, it continued, the Port Authority has maintained it is immune from suit.

Continuing, it asked: "Is it sensible to believe that our stockholders and directors would permit us to commit the company to substantial expenditures on a basis which would permit the Port Authority to take considered action that might diminish or destroy our investment, solely at its will and without the responsibility of proving its justification therefor in the usual courts of the land. We can not and will not make large investments in the New York airport area on that basis."

In addition to the "complete absence of a program which would merit the confidence of the usual industrial firm or investor," the letter went on, "we are subjected to a program of harassment which seems designed to discourage us from investment and expansion in the New York area." As evidence of "an organized campaign by the Port Authority to vex us beyond endurance," the airlines cited several recent harassments.

**Harassments.** One was a recent order of the Authority closing a road at LaGuardia which for many years had been used by the gasoline trucks of the airlines for transporting fuel from bulk storage to the point of dispensing to aircraft. This necessitated much longer journeys by the fuel trucks at considerable added expense to the carriers but without obvious benefit to the Port Authority.

A strong complaint was registered, and a 30-day extension was granted. Without this, some airlines, unable to get their fuel from one side of the field to the other, would have had to stop



**Regional Airport Plan**—The regional airport plan of the Port of New York Authority will take the above shape next year when the newly-acquired Teterboro Airport is developed into a major terminal to form the fourth point in the quadrant. Map shows locations of the four airports in relation to mid-Manhattan, and the ground travel time from each of them to Times Square.

operating. Even with the extension, there was hardly sufficient time for the airlines to procure gasoline trucks (which are not available) and have them licensed (which is impossible in that period of time), so that the fuel could be carried from the storage areas, which are on the airport, off the airport and onto the city streets, and back onto the airport.

Another harassment cited was the recent issuance of "new and arbitrary rules" for the use of parking aprons outside the hangars at LaGuardia, and the suggestion of "a rental therefor which is exorbitant and contrary to airport practice and to the terms of the leases."

"The nature and the manner of the area classification which brought about this new system of charges and impositions definitely indicates that this is but one of the series of harassments deliberately undertaken by the Port Authority against the tenants of the airport," the letter declared.

Mayor O'Dwyer turned the matter over for investigation to Edward C. Maguire, Commissioner of Commerce for the city.

## AOC Appoints Thompson

The Airport Operators Council, organized last January for purpose of exchanging information on air terminal problems and promoting and developing large public airports, last month appointed Cyril C. Thompson, of Evanston, Ill., as its executive secretary. Thompson is a former vice president of public relations for United Air Lines and more recently special consultant to the Santa Fe Railway System.

## PA Acquires Teterboro

With completion of arrangements for purchasing Teterboro Airport in Bergen County, N. J., for \$3,115,000, the Port of New York Authority last month tightened its hold on the airlines serving the New York metropolitan area.

The acquisition virtually forces the airlines serving the New York area to deal with the Port Authority for privileges and landing rights, since PA already controlled LaGuardia Airport, Newark Airport, and New York International.

Teterboro, located 25 minutes from Times Square, is a 500-acre field with three paved runways and 10 hangars. Under the contract, the Port Authority will take title to the property not later than April 1, 1949. Frederick L. Wehran, the owner, gets a down payment of \$100,000, and on assuming title the Authority will pay him an additional \$1,900,000, of which \$400,000 will be in cash and the remainder in Port Authority air terminal bonds bearing 3% interest and due in 1978. The Authority also will take over outstanding mortgages totaling about \$1,100,000.

Port Authority said the acquisition will "make possible the full regional pattern of airport development recommended by the CAA and the Regional Plan Association." (See cut.)

As for the airlines serving the metropolitan area, they seemed to have no alternative left, should the Port Authority continue to ignore existing contracts at both LaGuardia and International and to demand new and allegedly unreasonable landing fees and use charges, but to fight the matter through the courts.



## Domestic Traffic at Halfway Mark:

## Load Factors Down to 59%

By KEITH SAUNDERS

Thirteen thousand fewer passengers, plus 400,000,000 more available seat miles, added up to the lowest average load factor in years for the domestic trunk airlines during the first six months of 1948. (See table on page 43.)

Actually, the decrease in revenue passengers and revenue passenger miles flown in the first half of this year, as compared with the same period last year, was almost negligible. Reports filed with the Civil Aeronautics Board showed 5,868,385 revenue passengers carried and 2,781,552,000 revenue passenger miles flown through June 30 this year, as against 5,881,413 passengers and 2,867,901,000 passenger miles in the comparable 1947 period. The decrease in each case was but a fraction of 1%.

It should be noted, however, that the passenger traffic of the domestic trunklines would probably have been a little higher the first half of this year, instead of being down a little, had it not been for the strike of National Airlines' pilots.

National flew only 66,556 revenue passengers and 37,127,000 passenger miles through June 30 this year, as compared to 165,605 passengers and 89,966,000 passenger miles in the first half of 1947. Only 88,536,000 available seat miles were flown by National this year, against 145,147,000 last year, indicating the effects of the schedule disruptions and curtailments resulting from the strike.

But even the slightest decrease in traffic was certain to bring an appreciable decrease in the average load factor because of a substantial increase in space availability.

The reports showed that the trunklines flew 4,653,275,000 available seat miles this year, against 4,255,232,000 in the first half of last year. Revenue plane miles flown went up only from 151,920,535 to 152,421,920. This slight increase in plane miles flown, together with the extra seats made available through the introduction of more DC-6's and Constellations and the new Martin

2-0-2's and Convair Liners, resulted in the availability of 400,000,000 additional seat miles.

This, coupled with the slight drop in passenger traffic, sent the average load factor for the six-month period down to 59.7%, as compared to 67.4% in the first half of 1947.

**6 Carriers Above 60%.** Highest load factor reported was that of Hawaiian Airlines, with 68.4%. Only other trunklines with a better than 60% average load factor for the half-year period were the Big Four—American, United, TWA and Eastern—and Colonial. In the same period last year, 13 of the 16 carriers had load factors above 60% and six were above 65%.

Increases in all categories of cargo—mail, express and freight—pulled up the total ton miles of revenue traffic transported during the first six months of this year and enabled the airlines almost to hold their own as compared to last year with respect to percent of available ton miles used.

Available ton miles flown this year totaled 618,639,467, up 8.5% from the 569,984,029 figures for the same six months of 1947, while revenue ton miles of traffic for the 1948 half-year totaled 333,446,918, as compared to 316,704,112 in the first six months of 1947. Thus, despite the large number of passengers seats flown empty, the percent of available ton miles used dropped only from 55.6% last year to 53.8%.

**Freight Up 156%.** Highlight of the traffic reports for the first half of 1948 was an increase of 156% in freight ton miles over the comparable 1947 period—30,723,010 ton miles, as against 11,984,214.

All of the 16 trunklines operating within the continental United States showed large increases in freight volume this year, with American Airlines chalking up the greatest gain—from 3,767,493 to 9,199,373. United's volume rose from 3,758,619 ton miles to 8,971,136, Eastern's went from 608,890 to

2,479,932 ton miles, TWA's jumped from 1,800,716 to 4,264,263, and Capital's increased to 2,055,312 as compared to 897,288 ton miles for the first six months of 1947.

Express volume was up, too, but only by 9.5%—14,569,856 ton miles, as against 13,815,039. Mail volume for the first six months of this year was 17,031,730 ton miles, up 4.1% over volume for the comparable 1947 period. Only American, United, Western and National carried less mail this year than last.

One of the bright spots was the fact that the percent of scheduled miles completed moved up to 95.3%, as compared to 93.4% in the first half of 1947, indicating improved operating conditions and techniques.

## 162,000 Feeder Passengers

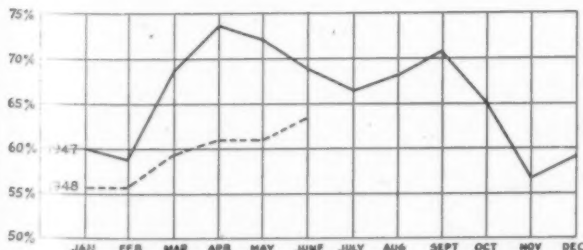
Traffic in all categories showed sharp increases on the nation's 10 operating feeder airlines the first half of this year, but load factors remained low, due largely to an increase of 150% in available seat miles flown and of 81% in available ton miles flown.

Figures filed with the Civil Aeronautics Board show that the feeders (exclusive of All American Aviation and Los Angeles Airways, which do not carry passengers) flew 162,513 revenue passengers 33,099,000 passenger miles in the first half of 1948, as compared to 81,049 passengers and 15,630,000 passenger miles in the same six months of 1947.

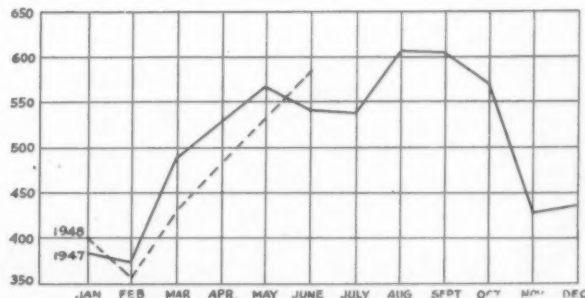
The number of available seat miles flown was 133,448,000 this year, against 53,154,000 in the 1947 half-year, which accounted largely for this year's passenger load factor of 24.8%, as compared to that of 29.4%.

However, there were three feederlines operating this year which were not in the picture in the first half of 1947: Trans-Texas, which started operating last fall, Wisconsin Central and Piedmont Airlines, both of whom inaugurated service last February. Divorcing their traffic from the six-months total and comparing only those airlines who operated in both periods, the figures show these gains:

Revenue passengers, 143,767 against 81,049, up 77.4%; revenue passenger miles, 28,839,000 against 15,630,000, up



LOAD FACTORS of the domestic airlines have averaged below 1947 for each of the first six months of this year. However, unlike 1947, the trend this year has been steadily upward each month through June. Industry average for the first half was 59.7%, compared with 67.4% a year ago.



REVENUE PASSENGER MILES of the domestic airlines have been on a regular upward climb since February. However, unofficial reports indicate that the curve may have taken a dip in July.

# Announcement!

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84.5%; available seat miles, 105,922,000 against 53,164,000, up 99.2%; passenger load factor, down from 29.4% to 27.2%.

Total ton miles of revenue traffic flown by the 10 feeders in the first half of 1948 amounted to 3,234,544. Traffic in addition to passengers was as follows: mail, 104,092; express, 57,120; freight, 101,709. This represented only 25.6% of the total available ton miles flown—12,612,620.

**Freight Service.** Last year, most of the feederlines had carried no freight at all, whereas six of them reported traffic of this type this year. Agressive development of freight traffic might help fill much of the available empty space being flown by these carriers. One handicap is that most of the feeder route points are non-industrial cities, but there still probably is an untapped cargo potential of respectable dimensions.

Pioneer, first of the certificated feeders, led in total number of passengers flown in the first half of this year, with 39,715, followed closely by Southwest Airways, with 38,364. West Coast was third with 29,693. The latter had the highest passenger load factor of the feeders, however, flying 3,583,000 passenger miles out of 10,975,000 available seat miles for a load factor of 32.6%. Southwest ranked second with a 32.2% load factor on 7,056,000 revenue passengers and 21,899,000 available seat miles flown. Pioneer's load factor was 30.7%.

The 10 feeders reported 6,802,586 revenue plane miles flown the first six months of this year out of 7,394,911 scheduled miles for a completion factor 92.0%.

### New Air Travel Cards

Inauguration of a new Universal Air Travel Plan which will enable travelers to buy air transportation on credit almost anywhere in the world is scheduled for Oct. 1 under an agreement announced last month by the Air Traffic Conference of America and the International Air Transport Association.

Under the plan, the traveler will generally be able, by making a deposit of \$425 or its equivalent in other currencies with one airline, to obtain a credit card which will be honored for transportation by all other subscribing airlines anywhere along their domestic and international routes.

A score of Canadian, Dutch, Scandinavian and U. S. airlines already have subscribed to the plan, and many others are expected to become members by Oct. 1. All of the more than 90 members of ATC and IATA, serving more than 200 countries are eligible to participate.

**Three Categories.** In order to conform to various national exchange controls, cards will be issued in three categories:

"International" cards, good for unrestricted universal air travel.

"Territorial" cards, good in North

America, the West Indies, the Bahamas, Bermuda, Newfoundland and the Hawaiian Islands.

"Controlled" cards, which can be used only within the limitations prescribed by certain countries on the amount of money their residents can spend on foreign travel.

Air Travel Credits, similar to letters of credit, will be issued in conjunction with controlled cards. Subscribers may specify whether they wish their cards to be usable by themselves alone, by certain other designated persons, or without any restrictions whatever.

Settlement of credit accounts between airlines issuing the cards and others honoring them will largely be made through the IATA Clearing House in London and the Airlines Clearing House in Chicago, which are already linked by an international agreement.

That the plan will find favor with the traveling public is indicated by the latest report of the Airlines Clearing House, which showed a \$10,000,000 increase in interline billings of the organization's 22 airline members against each other for the first six months of this year, as compared to the same period last year. Nearly all of the increase resulted from settlement of credit card sales.

### Winter Atlantic Excursions

Air traffic across the Atlantic had been pretty good all summer, but what concerned most of the international airlines was how to keep volume up during the coming fall and winter months. Last month it appeared most of them had decided the answer was winter excursion fares.

First carrier to file such fares with CAB was Pan American Airways, which proposed trans-Atlantic fares, applicable on round-trip passage, that were 25% below present round-trip fares. Sample fare: New York to London, \$466.70, compared to a present fare of \$630.

Affected would be all PAA flights to Eire, United Kingdom, Europe, Central Africa, South Africa, the Middle East and India, beginning Oct. 1. A 30-day limit would apply on tickets to Europe, a 60-day limit to Africa.

Within a few days, SABENA Belgian Airline and Scandinavian Airlines System announced their plans for instituting reduced round-trip fares across the Atlantic.

SAS planned a round-trip tariff based on the one-way fare plus 25%, good from Oct. 1 through next Mar. 1. The New York-Stockholm fare would be \$576.45, compared with present \$763.60, and fares to Oslo and Copenhagen would be cut \$730.60 to \$576.45. SABENA expected to offer a round-trip tariff which would be one-third more than the one-way fare.

**Tourist Dollars Wanted.** Air France next entered the picture, announcing 30-day round-trip excursion fares effective Oct. 1 to Apr. 1, of \$493.40 for

passage from New York to Paris or London, compared with \$666 at present. Henri J. Lesieur, general manager of Air France for North America, said the new rate had been under consideration for a long time and was influenced only by the desire to bring more tourist dollars into France.

American Overseas Airlines based its proposed excursion rate on one and one-third of one-way fares. Its New Oct. 1 to May 1, would be \$466.70, same as that offered by Pan American. Other AOA fares would be: Washington-Oslo, \$577.70, as against a present fare of \$755.20; New York-Amsterdam, \$508, down from \$685.80; Boston-Shannon, \$410.70, down from \$554.40.

TWA's 30-day round-trip fare between New York and Paris would be \$493.40, compared with the present \$666, thus matching the excursion fare announced by Air France. Other proposed TWA excursion fares were: Washington-Rome, down from \$832.60 to \$614.93; Washington-Bombay, \$1,176.26, as against \$1,590.40.

KLM Royal Dutch Airlines filed reduced round-trip fares generally comparable to those of competitive carriers. For example, its New York-Amsterdam round-trip fare will be \$508, against the present \$685, exactly matching the AOA excursion rate between those points.

British Overseas Airways Corp., Swissair, and Trans-Canada Air Lines had not yet acted on trans-Atlantic excursion fares at presstime.

Whether CAB would approve the excursion fares of the U. S.-flag lines remained to be seen, but it was considered unlikely the Board would deny them, thus placing the American carriers at a competitive disadvantage with the foreign-flag operators. An International Air Transport Association resolution adopted by all IATA traffic conferences allows members to institute excursion fares between specific points, but provisos written into CAB's approval of the resolution make it possible for the Board to disapprove excursion fares of U. S. international airlines.

### AA Offers Sleeper Service

Transcontinental air sleeper service is now available for the first time since 1941, when the Air Force requisitioned coast-to-coast sleeper planes then in service. American Airlines, beginning Sept. 1, is offering eight berths daily in each direction on its DC-6 Mercury flights between New York and Los Angeles.

Normally outfitted to carry 52 passengers in reclining chairs, the DC-6 sleepers provide seats for 36 passengers and are fitted with four upper and four lower berths in a private compartment at the rear of the plane. Berths may be occupied by Los Angeles-bound passengers an hour before departure at La Guardia Field, and eastbound passengers will be permitted to sleep an hour after arrival in New York. Double oc-



**Skyberth**—A view looking into the spacious lower berth of a DC-6 sleeper plane. In service to be inaugurated Sept. 1, American Airlines will provide eight berths daily in each direction between Los Angeles and New York. Ninety dollar berth charge includes privileges of dual occupancy of lower berths.

cupancy of the lower berths, which are of extra large size, is permitted.

American's New York-Los Angeles

fare with Skysleeper accommodations is \$247.85 plus tax, or \$90 more than the regular fare.

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## TRAFFIC & SALES

### Bargain Rate to Mexico

American Airlines last month put into effect a bargain rate for transcontinental air travelers who might like to make a side trip into Mexico. For an extra charge of \$46.30, passengers flying from the East Coast to Los Angeles could arrange their routing to provide for a Mexico City stopover, and passengers bound for San Francisco could make stopovers at both Mexico City and Los Angeles for \$65.45 above the direct routing fare. The bargain would be available only until Sept. 30, when excursion rates to Mexico expire.

In cooperation with travel agents, American was distributing hundreds of catch-all travel bags to prospects in metropolitan areas, featuring the new vacation rate to Mexico City.

### Pioneer in 4th Year

Pioneer Air Lines (originally Essair, Inc.), first of the feeder or community airlines to begin operating under a CAB temporary certificate, felt it had much to be proud of as it celebrated its third anniversary on Aug. 1.

From an original route system of 638 miles, it had grown to 2,200 route miles; the number of cities served had increased from six to 24; the number of schedules operated had grown from four to 26 daily; passenger volume had risen from less than 1,000 to 9,000 monthly;

the number of employees had increased from 69 to 444, and flight equipment owned by the company had increased from three Lockheed Electras to nine DC-3 passenger planes and two C-47 cargo planes.

During its three years of operations, Pioneer had flown more than 41,000,000 passenger miles, carrying 136,000 passengers between the Texas and New Mexico cities it serves. Passengers numbered 4,452 during the five months it operated in 1945, 20,687 in 1946, 62,698 in 1947, and nearly 50,000 during the first seven months of 1948. And there had not been a single injury or fatality to passenger or crew during the entire period.

While Pioneer is now in its fourth year of operation its feederline certificate was reissued in November, 1946, to run three years until Nov. 14, 1949. The reissuance came at the time that Pioneer was awarded new routes in the Texas-Oklahoma area decision, in order that certificates for the old and new routes would run concurrently.

### WAL's Convair Schedules

Western Air Lines has set up schedules of 1 hour and 38 minutes between Los Angeles and San Francisco for the Convair-Liners it is placing in service on Sept. 1. This compares with 2 hours for DC-4 schedules, and with 1 hour and 45 minute runs with TWA's Constellation and United's DC-6 equipment.

Western will start with four-round-trip Convair flights daily between Los Angeles and San Francisco, and one through schedule between San Diego and Seattle.

### Am. Aviation Tariff Reports

A new service for air shippers and airline tariff departments has been added to the AMERICAN AVIATION list of publications and industry services.

Titled AIR TARIFF REPORTS, the new service is issued from Washington three days weekly. Data are taken from latest tariff filings with the Civil Aeronautics Board and presented in condensed, coded form for quick-reference use by all persons concerned with passenger fares, cargo tariffs, and related regulations. Separate reports are issued for passengers and cargo.

Data filed by non-scheduled and irregular carriers, as well as by certificated airlines, are included in the reports.

Subscription rate is \$75 yearly for both services, or \$50 per year for either passenger or cargo reports.

**Football Charter:** Capital Airlines already has booked charter flights for five teams of the All-American Football Conference, two National Football League teams, and 10 college elevens for the 1948 season, and is negotiating with other clubs.



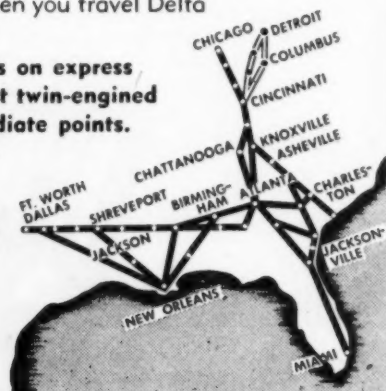
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## U. S. Domestic Airline Traffic for January-June

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES	REV. TRAFFIC	AVAILABLE TON-MILES	% AVAILABLE TON-MILES USED	REVENUE PLANE MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
American	1,211,431	572,644,000	949,049,000	60.3%	3,316,269	2,660,855	3,199,373	71,063,090	134,687,004	52.7%	25,561,890	26,149,292	95.7%	
Boeing	265,448	92,538,000	166,613,000	55.5%	443,392	470,335	530,644	10,287,582	20,273,972	50.7%	5,313,308	5,311,498	92.9%	
Capital	476,923	127,153,000	261,831,000	48.5%	401,378	984,911	2,055,312	15,597,763	33,096,959	47.1%	8,140,968	8,619,924	92.9%	
Caribbean	37,444	2,323,000	5,042,000	46.0%	2,668	...	3,087	192,480	450,678	42.7%	199,144	199,536	99.6%	
C & S	128,790	51,016,000	87,368,000	58.3%	209,440	302,820	256,325	5,669,692	11,175,917	50.7%	3,287,545	3,444,412	94.4%	
Colonial	99,158	16,623,000	26,801,000	62.0%	37,809	25,039	13,399	1,810,975	3,270,627	55.3%	1,283,340	1,293,391	92.6%	
Continental	74,281	27,236,000	54,019,000	50.4%	78,150	47,461	125,622	2,861,530	6,007,360	47.6%	2,626,514	2,627,197	98.4%	
Delta	232,311	91,597,000	176,677,000	51.9%	450,008	424,081	781,521	10,473,233	23,636,187	44.3%	6,486,841	6,992,537	92.6%	
Eastern	1,008,578	529,415,000	856,679,000	61.7%	2,027,066	1,876,977	2,479,932	60,355,367	116,146,226	51.9%	24,835,997	25,560,547	95.2%	
Hawaiian	163,002	22,861,000	33,415,000	68.4%	18,465	66,077	282,235	2,224,626	3,875,577	57.4%	1,525,246	1,247,492	98.3%	
Inland	34,146	12,478,000	22,292,000	55.9%	49,884	24,980	31,027	1,299,764	2,300,490	56.3%	1,144,343	1,162,030	98.3%	
NCA	148,675	44,399,000	75,202,000	59.6%	132,868	88,768	130,544	4,608,954	7,766,255	59.7%	3,766,607	3,802,124	98.2%	
National *	66,556	37,127,000	88,536,000	48.5%	119,808	327,479	401,149	4,706,632	13,364,934	75.2%	2,172,490	2,283,499	93.9%	
Northeast	117,292	22,095,000	50,740,000	43.9%	28,728	66,522	99,958	2,204,130	4,977,322	44.1%	1,538,499	1,765,688	83.9%	
Northwest	289,102	152,235,000	261,382,000	58.2%	1,031,222	803,356	762,397	17,222,063	32,548,948	52.9%	7,848,530	8,025,629	96.6%	
TWA	565,753	410,672,000	666,657,000	61.6%	4,574,507	2,821,609	4,264,263	51,225,222	82,283,737	62.2%	25,740,436	26,312,535	95.1%	
United	855,589	516,795,000	775,976,000	66.6%	3,094,283	3,483,365	8,971,136	65,929,780	110,866,500	59.5%	27,873,368	28,314,183	95.9%	
Western	133,904	52,345,000	94,996,000	55.1%	216,054	145,222	337,066	5,714,015	11,870,174	48.1%	3,083,454	3,053,864	98.1%	
TOTALS	5,868,385	2,781,552,000	4,653,275,000	59.7%	17,031,730	14,569,856	30,723,010	333,446,918	618,639,467	53.8%	152,421,930	156,165,398	95.3%	
* ALPA pilot strike started midnight February 3, 1948.														

\* ALPA pilot strike started midnight February 3, 1948.

## U. S. Feeder Airline Traffic for January-June

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES	REV. TRAFFIC	AVAILABLE TON-MILES	% AVAILABLE TON-MILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
All American	.....	.....	13,859,000	15.9%	18,039	14,607	.....	32,726	172,944	18.6%	845,401	923,578	91.3%	
Challenger	6,682	2,197,000	13,859,000	15.9%	12,913	7,187	16,558	256,990	1,119,208	22.9%	699,972	751,340	87.8%	
Empire	9,204	2,039,000	8,193,000	24.9%	9,955	3,804	.....	189,550	609,652	31.0%	481,347	509,015	94.3%	
Florida	6,443	864,000	3,229,000	26.0%	3,791	2,227	.....	84,457	362,358	23.2%	414,538	424,689	96.9%	
Monarch	11,666	2,653,000	13,733,000	19.3%	11,205	6,130	33,168	321,790	1,181,962	27.2%	762,411	889,513	85.7%	
Piedmont *	9,418	2,309,000	9,752,000	23.7%	5,124	4,013	2,846	232,705	977,082	23.7%	465,385	501,272	92.0%	
Pioneer	39,715	10,447,000	34,034,000	30.7%	24,404	9,159	12,969	845,550	3,533,573	23.9%	1,417,538	1,510,940	93.2%	
Southwest	38,364	7,056,000	21,899,000	32.2%	19,705	13,202	33,875	774,893	2,264,903	34.2%	1,077,857	1,132,348	94.9%	
Trans-Texas	6,361	1,453,000	15,547,000	9.3%	7,492	3,533	2,293	141,961	1,237,492	11.4%	701,398	744,260	94.6%	
West Coast	29,693	3,363,000	10,975,000	32.6%	6,232	4,781	.....	334,428	1,110,893	30.1%	579,446	614,964	92.5%	
W. Coast.**	2,967	498,000	2,227,000	22.4%	3,371	3,106	.....	52,212	215,497	24.2%	242,690	319,570	75.9%	
TOTALS	162,513	33,099,000	133,448,000	24.8%	122,131	71,807	101,709	3,267,270	12,785,564	25.3%	7,647,987	8,318,489	91.6%	
Helicopter Mail Service														
Los Angeles	.....	.....	.....	.....	10,225	.....	.....	10,225	41,303	24.7%	123,078	128,295	94.1%	
* Began operations February 20, 1946.														
** Began operations February 20, 1946.														

\* Began operations February 20, 1948.

\*\* Began operations February 24, 1948.

## U. S. Domestic Airline Traffic for June

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON MILES	EXPRESS TON MILES	FREIGHT TON MILES	TOTAL TON MILES	REV. TRAFFIC	AVAILABLE TON MILES	% AVAILABLE TON MILES USED	REVENUE PLANE MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
American	275,398	130,971,000	213,641,000	61.3%	702,777	487,913	1,724,495	15,466,945	29,975,107	51.6%	5,279,364	5,218,894	99.8%	
Boeing	51,543	17,691,000	30,989,000	57.0%	70,522	73,964	85,325	1,926,141	3,746,734	51.4%	940,687	924,673	99.0%	
Capital	99,228	27,105,000	53,493,000	50.6%	69,077	154,476	344,733	3,161,610	6,726,965	47.0%	1,602,873	1,606,342	98.7%	
Caribbean	5,706	356,000	895,000	39.7%	421	...	640	29,647	79,584	37.2%	34,829	34,829	100.0%	
C & S	26,392	10,305,000	16,592,000	62.1%	37,789	50,127	50,264	1,126,692	2,160,263	52.1%	621,387	615,798	99.9%	
Colonial	13,263	3,702,000	5,457,000	67.8%	5,291	4,124	2,108	385,005	730,070	52.7%	261,999	259,320	97.6%	
Continental	15,081	5,606,000	9,906,000	56.5%	13,269	8,408	30,347	589,035	1,103,851	53.3%	480,876	480,960	99.9%	
Delta	44,663	15,748,000	27,955,000	56.3%	61,325	63,685	138,115	1,775,537	3,733,340	47.9%	1,060,841	1,078,956	98.1%	
Eastern	176,919	78,977,000	130,876,000	60.3%	327,579	274,799	408,352	8,832,110	18,332,797	48.1%	4,013,408	4,025,460	99.2%	
Hawaiian	33,912	4,767,000	6,640,000	70.7%	3,215	47,998	47,998	402,651	756,619	53.2%	301,019	232,293	99.2%	
Inland	6,820	2,379,000	3,734,000	69.0%	7,309	4,547	7,948	266,689	385,491	69.1%	189,255	191,400	98.9%	
NCA	29,718	8,856,000	14,353,000	61.7%	24,099	17,467	30,067	920,383	1,485,356	61.9%	710,931	704,340	99.9%	
National	15,016	8,076,000	22,612,000	35.7%	27,621	77,802	46,926	975,318	3,178,915	30.6%	524,166	531,242	98.6%	
Northeast	24,624	4,837,000	10,056,000	48.1%	5,808	7,548	16,359	458,767	1,015,350	45.1%	303,288	333,050	88.4%	
Southwest	68,453	37,994,000	56,792,000	66.9%	163,063	140,008	155,523	4,096,780	7,027,100	58.3%	1,610,344	1,568,148	99.8%	
TWA	117,630	82,094,000	122,044,000	67.2%	542,298	452,192	717,109	9,606,535	14,951,826	64.2%	4,631,439	4,517,973	99.4%	
United	199,486	131,610,000	178,541,000	73.7%	770,733	615,905	1,042,783	15,897,603	25,694,680	61.0%	5,357,435	5,247,943	99.2%	
Western	24,399	10,087,000	15,995,000	63.0%	39,342	28,197	49,083	1,083,771	2,081,322	52.9%	552,542	514,884	99.8%	
TOTALS	1,228,131	581,361,000	920,991,000	63.1%	2,871,538	2,472,380	5,698,175	66,960,819	123,105,570	54.3%	28,456,680	28,086,405	99.2%	

## U. S. Feeder Airline Traffic for June

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MAILES	EXPRESS TON-MAILES	FREIGHT TON-MAILES	TOTAL TON-MAILES	REV. TRAFFIC TON-MAILES	AVAILABLE TON-MAILES FLOWN	% AVAILABLE TON-MAILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
All American	2,495	709,000	2,495,000	28.4%	3,435	3,127	8,562	15,997	35,925	18.2%	157,896	159,338	99.1%	
Challenger	2,691	602,000	1,767,000	33.6%	3,453	1,602	4,223	80,530	201,374	39.7%	118,840	124,500	95.4%	
Empire	1,153	152,000	520,000	29.2%	990	272	15,397	58,417	26,766	45.7%	85,088	85,088	99.7%	
Florida	3,323	730,000	2,949,000	28.6%	2,145	1,396	6,113	82,900	226,406	36.6%	141,606	149,537	94.6%	
Piedmont	4,046	977,000	3,606,000	27.1%	1,922	1,775	1,520	98,847	358,353	27.7%	170,562	171,900	99.2%	
Pioneer	8,918	2,352,000	7,475,000	31.4%	5,999	2,012	3,902	218,790	719,817	27.6%	311,345	312,440	99.6%	
Southwest	9,308	1,681,000	4,690,000	36.1%	3,465	3,204	5,373	180,727	464,924	30.6%	221,253	229,244	96.2%	
Trans-Texas	1,539	374,000	2,880,000	12.9%	1,108	921	1,247	37,045	255,133	14.7%	137,152	137,092	99.4%	
West Coast	6,474	820,000	2,189,000	37.4%	1,004	915	75,398	217,993	34,776	33.2%	111,760	118,076	94.7%	
W. Cent.	1,069	185,000	561,000	32.9%	826	845	19,461	58,676	33,226	33.2%	64,822	75,300	86.0%	
TOTALS	41,236	8,582,000	28,712,000	29.0%	25,024	17,049	22,376	875,129	2,726,630	32.0%	1,587,086	1,670,865	97.2%	
					Helicopter Mail Service									
Los Angeles	2,517	602,000	1,767,000	33.6%	3,453	1,602	4,223	80,530	201,374	39.7%	118,840	124,500	95.4%	

## U. S. International Airline Revenues & Expenses for May

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	U. S. MAIL REVENUES	FOREIGN MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
American	\$ 297,560	\$ 236,122	\$ 6,130	\$ 5,522	\$ . . . .	\$ 31,237	\$ 4,344	\$ . . . .	\$ 339,119	\$ 178,114	\$ 161,005	\$ -41,558
Amer. Overseas	1,659,282	1,441,221	130,077	29,939	60,899	. . . .	28,784	. . . .	1,728,570	782,994	945,576	-69,288
C & S	87,197	41,333	39,696	. . . .	. . . .	5,619	521	28	90,197	44,952	45,245	-3,000
Colonial	119,781	90,758	27,792	. . . .	. . . .	607	624	. . . .	140,083	57,661	82,422	-20,302
Eastern	73,419	64,811	2,587	. . . .	. . . .	5,108	912	. . . .	87,908	44,864	43,044	-14,489
National	51,914	38,146	3,763	. . . .	8,959	. . . .	1,046	. . . .	97,374	34,996	62,378	-45,460
Northwest	856,530	370,921	303,640	31,446	2,475	57,254	9,788	. . . .	781,602	378,907	402,695	74,928
Panagra	1,170,532	863,058	92,885	65,685	122,281	. . . .	30,282	-167	1,289,055	615,858	673,197	-118,523
Pan American	4,944,135	3,581,987	186,914	167,970	735,871	. . . .	113,326	34,699	4,931,792	2,042,862	2,888,930	12,343
Latin Amer	3,447,001	2,465,758	479,926	116,021	224,458	. . . .	59,890	24,765	3,221,024	1,641,231	1,579,793	225,976
Atlantic	2,638,142	1,487,961	889,575	41,253	147,634	. . . .	25,804	33,291	2,515,917	1,445,999	1,069,918	122,225
Pacific	459,038	231,316	171,757	. . . .	53,713	. . . .	1,238	. . . .	444,467	218,845	225,622	14,571
Alaska	2,956,618	1,963,208	541,729	195,594	160,762	. . . .	67,989	6,300	3,449,967	1,356,119	2,093,848	-493,349
TWA	280,738	251,512	19,855	6,199	6,199	. . . .	4,121	. . . .	253,893	127,529	226,364	26,846
United												
TOTALS	19,041,887	13,050,112	2,976,346	653,430	1,523,251	99,825	347,869	98,916	19,370,968	8,970,931	10,400,037	-329,080

1) Represents company's estimate of amount which should be received in accordance with terms of the Civil Aeronautics Act, when permanent rates are established. Estimate exceeds temporary rates in effect by \$274,715.  
2) Temporary rates in effect exceed estimate by \$275,320.  
3) Estimate exceeds temporary rates in effect by \$21,482.

**NOTE:** Data in above tabulations were compiled by American Aviation Publications from monthly reports filed by the airlines with the Civil Aeronautics Board. Figures for American Airlines include that carrier's service to Mexico but not to Canada; for C & S to Havana, Colonial to Bermuda; Eastern to Puerto Rico; National to Havana; Northwest to Orient, and United to Honolulu. Operations of U.S. carriers into Canada are included in domestic reports to CAB, in accordance with CAB filing procedures.

## U. S. International Airline Traffic for June

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	U. S. MAIL TON-MAILES	FOREIGN MAIL TON-MAILES	EXPRESS TON-MAILES	FREIGHT TON-MAILES	TOTAL TON-MAILES	REV. TRAFFIC TON-MAILES	AVAILABLE TON-MAILES FLOWN	% AVAILABLE TON-MAILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
American	9,309	5,374,000	8,607,000	62.0%	7,999	1,679	...	165,927	742,159	1,434,555	51.7%	214,154	225,755	93.9%	
Amer. Overseas	8,893	22,779,000	29,642,000	76.1%	111,146	15,188	146,443	...	2,693,421	4,065,369	66.2%	748,951	746,368	99.1%	
Branniff	288	446,000	3,407,000	13.0%	772	...	...	3,082	46,555	483,115	9.6%	69,544	69,544	100.0%	
C & S	1,172	803,000	1,890,000	43.0%	156	...	...	7,433	88,768	207,076	42.8%	41,100	41,100	100.0%	
Colonial	1,996	1,249,000	2,385,000	52.3%	499	138	...	7,305	143,759	317,868	45.2%	54,985	54,716	100.0%	
Eastern	1,821	1,894,000	3,461,000	54.7%	2,810	...	...	31,090	230,925	396,552	58.2%	62,400	62,400	100.0%	
National	1,909	612,000	1,990,000	30.8%	889	...	13,300	...	76,733	261,834	29.3%	34,680	34,680	100.0%	
Northwest	2,530	4,870,000	8,847,000	55.0%	126,279	13,114	5,012	102,569	757,255	1,368,044	55.3%	352,272	352,272	99.9%	
Panagra	7,144	8,697,000	15,110,000	57.5%	18,354	32,063	119,105	2,930	1,144,275	2,017,480	56.5%	470,246	465,628	97.6%	
Pan American	53,649	46,957,000	87,870,000	53.4%	242,215	16,866	1,234,296	84,716	6,432,998	11,950,840	53.0%	2,358,214	2,368,579	98.7%	
Lat. Amer.	12,036	31,708,000	43,608,000	72.7%	186,947	40,758	352,138	38,828	4,058,771	6,267,629	64.7%	1,218,632	1,195,670	95.4%	
Atlantic	8,748	25,979,000	34,591,000	75.1%	298,913	12,248	313,991	...	3,181,899	4,773,911	66.6%	1,360,638	1,332,662	99.9%	
Pacific	3,826	3,530,000	7,003,000	50.4%	34,266	...	302,324	...	694,877	1,324,045	52.4%	228,740	211,382	99.9%	
TWA	7,679	25,258,000	39,154,000	64.5%	189,358	79,577	442,579	...	3,529,390	5,542,005	63.6%	1,100,566	1,009,439	99.9%	
United	2,336	5,606,000	6,501,000	86.2%	28,387	...	9,869	...	612,315	747,254	81.9%	153,600	144,000	100.0%	
TOTALS	122,736	185,562,000	293,706,000	63.1%	1,250,950	211,631	2,939,057	443,880	24,430,900	44,137,577	59.3%	8,469,374	8,314,195	98.4%	

\* In addition to mail ton miles the following international parcel post ton miles were listed:  
American Overseas 14,734; Colonial 95; Pan American Division 15,278; TWA 24,494

\*\* Began operations June 4, 1948.



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- P&W R-1830-92 Engine Parts, Accessories and Components

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- Douglas DC-4 Airplane Parts and Accessories and Ground Equipment
- P&W R-2000-13 (25D13G) Engine Parts, Accessories and Components (many of which are interchangeable with R-2000-7-9-11 Engines).

These inventories are available for inspection at our warehouses at Astoria, L. I., New York, Tulsa, Oklahoma and Fort Worth, Texas, and offered F.O.B. these points for domestic shipment at very attractive prices.

Prompt attention will be given to all requests for quotations directed to the attention of the Director of Surplus Sales at the above address. Write, Telegraph or Telephone (Ravenswood 2-1060).

## Classified Advertising

The rates for advertising in this section are as follows: "Help Wanted," "Positions Wanted," "Aircraft Wanted or For Sale," and all other classifications \$1.00 a line, minimum charge \$4.00. Estimate bold face heads 30 letters and spaces per line; light body face 40 per line; box numbers add two lines. Terms, cash with order. Forms close 20 days preceding publication date. Rates for display advertisements upon request. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1025 Vermont Avenue, N.W., Washington 5, D. C.

### POSITIONS WANTED

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Ex Colonel and Airline Pilot desires position with corporation contemplating purchase of executive transport. Not interested in position as aerial chauffeur, but where will have administrative position in sales, purchasing, public relations or labor relations. Can plan, organize, direct and control department or company. Knows principles of handling people; business organization, unity of command, span of control, and homogeneous assignment; motion economy, including efficient work flow and lay-out—THERBLIGS. Three years command and staff experience. An airline pilot is your best insurance policy. Box 145, San Mateo, California.

Certificated CAA dispatcher with overseas dispatching experience desires dispatching or operational assignment in the United States, preferably in California. Good references. Box No. 629. AMERICAN AVIATION, 1025 Vermont Avenue, N. W., Washington 5, D. C.

Airline Transport Pilot DC-3. With major airline 3½ years. Considerable experience DC-4, DC-6. 3,400 hours. Accountant; married; 33 years of age. Desires pilot affiliation company or individual. Veteran. Box No. 630. AMERICAN AVIATION, 1025 Vermont Avenue, N. W., Washington 5, D. C.

### FOR SALE

DELUXE PASSENGER PBV-5A. EXCELLENT CONDITION, VERY LOW ENGINE TIME. PRICE \$68,000. WRITE: Box No. 625, AMERICAN AVIATION, 1025 Vermont Avenue, N. W., Washington 5, D. C.

Lockheed Lodestar. Factory passenger interior. Complete airline equipped. Just certificated. Under 1000 hours total time. Beautifully polished. Will sell, trade or lease. Arthur C. Hyde, Congressional Airport, Rockville, Maryland. Oliver 8888.

### Babb Sells Trainers to China

Sale to the Chinese Air Force of 200 North American Harvard trainers, 125 Pratt & Whitney engines as replacement units for the planes, and a large quantity of spare parts, has been announced by The Babb Co., Inc.

It was also stated that Babb International, S.A. has been dissolved. Jim Boyce, formerly mentioned as succeeding Sol Vorhees as chairman of Babb International in Geneva, Switzerland, is director of European operations for The Babb Co., Inc.

WORLD-WIDE distributors of multi-engine transport type aircraft, engines, their components and accessories. Agent for WAR ASSETS ADMINISTRATION. Write, wire or telephone your requirements.



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## WINGS OF YESTERDAY

### 25 Years Ago

The U. S. Air Mail Service on Aug. 25, 1923 concluded a successful four-day demonstration of the practicability of 28-hour air communication between the Atlantic and Pacific coasts by relays of mail planes flying day and night.

The American Bar Association unanimously endorsed the enactment of a Federal law to regulate aviation.

### 10 Years Ago

(IN AMERICAN AVIATION)

A National Air Mail Feeder Conference was held in Kansas City, Mo. Oct. 6-8, 1938 under the auspices of the Southwest Aviation Conference and the Kansas City Chamber of Commerce. Its purpose was to organize a national campaign to establish air mail feeder lines as a system covering the United States.

At 12:01 a.m. Monday, Aug. 22, 1938, the Civil Aeronautics Authority assumed control over civil aviation in the U. S. as the Civil Aeronautics Act of 1938 became legally effective.

## LETTERS

### Short Count for Feeders

To the Editor:

You state (July 15, p. 16) that there are 16 certificated feeder airlines, 10 of them operating; also, "Feeders to whom certificates had previously been issued but who have been delayed in implementing them are Island Air Ferries, Inc., Air Commuting, Inc., and Parks Air Transport."

Gee whiz, there are more of them than that. Central Airlines, Inc., Southern Airways, Inc., E. W. Wiggins Airways, Inc., and Yellow Cab Company of Cleveland all have certificates. So does Roscoe Turner Aeronautical Corp., but Turner should very soon pass into the category of lines operating.

There must be, by this count, 21 feeder airlines certificated to carry passengers on the three-year temporary basis. Of this number, 18 (subtracting Air Commuting, Island Air Ferries, and Yellow Cab of Cleveland) have full authorization for passengers and mail. There are only 16 regular trunk airlines in continental United States. The 18 feeders have them outnumbered. Small cities outnumber large ones, too.

JOHN M. HENDRICK,  
Burbank, Calif.

(Editor's Note: Reader Hendrick is right in calling us on the short count given the feeders. To set the record straight, here is the feeder lineup as of now.)

A total of 23 companies have been approved by CAB for feeder-type service. In operation are 12, including All American Aviation (mail & express only), Challenger, Empire, Florida, Los Angeles Airways (mail only), Monarch, Piedmont, Pioneer, South-

west, Trans-Texas, West Coast, and Wisconsin Central.

Not yet operating are 11, including Air Commuting, Arizona Airways, Central Airlines, Iowa Airplane Co., Island Air Ferries, Parks Air Lines, Robinson Airlines, Southern Airways, Roscoe Turner Aeronautical Corp., E. W. Wiggins and Yellow Cab of Cleveland. In addition, Chesapeake Airways has a temporary certificate good until Oct. 1 but has not started exercising it.)

## BOOKS

**AIRLINE RECORD. 1948 Edition.** Compiled and published by Roy R. Roadcap, 208 S. LaSalle St., Chicago 4, Ill. 112 pp. \$7.50.

This is the first of a series of projected annual editions of route, traffic and financial data pertaining to airline operations. It contains data of all airlines for securities held by the public, and while not too analytical, it does introduce some comparative ratios to facilitate appraisal of airline records.

For each airline it gives data on routes, the history and management, revenue traffic statistics, income accounts, payload and income account analysis, balance sheets, capitalization and financial ratios, and historical financial summary. The information is quite complete from 1941 to 1947 inclusive, and for some companies the data go back to 1935. Sources are CAB reports and company reports.

Twenty-three U. S. and one foreign (TACA Airways) are included. Among these are all of the so-called trunk lines, the Alaska Airlines, Wisconsin Central, and West Coast. The following are not included, however: Caribbean-Atlantic, Trans-Texas, Challenger, Monarch, Empire, Florida, Hawaiian, Los Angeles Airways, Piedmont, and Southwest, all but several having been in operation a comparatively short time.

This is the first time, it is believed, that anyone has collected between two covers the essential financial and operating data of the majority of airlines. It is a worthy effort. Essentially it is a collection of basic information from which analysis can be made.

### Booklets

**Customs Hints:** The Air Transport Association, along with other transportation groups, is cooperating with the Treasury Department in the publication and distribution of an illustrated brochure telling its readers in non-technical language how they may speed themselves through the American customs when returning from a trip out of the Country or when entering the U. S. from a foreign country. Titled "Customs Hints," it sums up essential points of customs laws and regulations.

Tens of thousands of the brochures will be distributed, mostly at the expense of such organizations as ATA, the American Automobile Association and rail and steamship groups.

**Story of LAMSA:** A 44-page booklet prepared by United Air Lines' Education and Training Department in San Francisco is being used to acquaint UAL traffic personnel with the story of Lineas Aereas Mexicanas, United's Mexican subsidiary.

The booklet deals with LAMSA's background, its service facilities and routes, facts about each of the cities it serves, and information about the people, language, climate and geography of the various regions of Mexico served by the airline.

Major credit for the compilation and writing of the booklet goes to Ben L. Hechinger, of United's education and training department.

## OBITUARY

### Mac Short

Mac Short, 51, v. p. of Lockheed Aircraft Corp. in charge of military relations, died of a heart attack at his work at the Lockheed factory, Burbank, Calif., on Aug. 13.

A veteran of 30 years in aviation, Short was one of the nation's best known aviation designers and was the first president of the Vega Airplane Co., a subsidiary of Lockheed, in 1937. He helped form the Stearman Aircraft Co. of Wichita in 1927 and it was during his service as v. p. and chief engineer of Stearman that he first was associated with Robert E. Gross. Short spent some time with the Boeing Airplane Co. before rejoining Gross as president of Vega. When Lockheed and Vega were merged in 1943, he became v. p. of engineering for Factory A of Lockheed. He was made v. p. in charge of military relations in 1946.

In 1943, Short was elected president of the Society of Automotive Engineers, the first time the honor had gone outside the automobile industry.

### This Air Age

**Eggs:** Transocean Air Lines has started on a contract to fly 45,000 dozen fresh eggs from Oakland Airport to Guam. The first plane carried 7,050 dozen. The egg express continues on to China to fly back company crews delivering C-46's to the Chinese Air Force.

**Laundry:** Bachelors in Sweden reportedly are having difficulty getting shirts back from laundries in less than three weeks. One irate Swede defeated the time delay by packaging up a dirty shirt and air mailing it to the U. S. for washing. Scandinavian Airlines System, which brought the shirt to New York, indicated that the enterprising bachelor would have his shirt back just three days after he sent it, or two and one-half weeks sooner than if he had taken it to a Stockholm laundry.

**Sea Service:** The S. S. Choluteca was recently returned to service at least a week sooner than expected, thanks to a fast shipment of a vital engine replacement by Pan American Airways. The steamer was laid up at Cristobal, C. Z., until a 5,100-lb. shaft, complete with bearings, was shipped by air from Baldwin Locomotive Works in Philadelphia to Miami where it was transferred to a PAA cargo Clipper.

**Pilgrimages:** Roy Chalk, president of Trans-Caribbean Air Lines, has gone to Rome to arrange for participation in transportation of some of the 250,000 Americans expected to visit Rome in 1950, the year for the decennial Vatican pilgrimages.

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